Indiana Department of Environmental Management
Office of Water Quality
Wetlands Section

Publication Date:
June 9, 2010

Closing Date:
June 29, 2010

PUBLIC NOTICE

IDEM ID Number:
2010-161-32-BCB-A

Corps of Engineers ID Number:
LRL-2010-426-sjm

To all interested parties: This letter shall serve as a formal notice of the receipt of an application for **Section 401 Water Quality Certification** by the Indiana Department of Environmental Management (IDEM). The purpose of the notice is to inform the public of active applications submitted for water quality certification under Section 401 of the Clean Water Act (33 U.S.C. § 1341) and to solicit comments and information on any impacts to water quality related to the proposed project. IDEM will evaluate whether the project complies with Indiana's water quality standards as set forth at 327 IAC 2.

1. Applicant:
Mr. James Waggoner
Town of Brownsburg
61 North Green Street
Brownsburg, IN 46112

2. Agent:
Ms. Mary Atkins
Wessler Engineering
6219 South East Street
Indianapolis, IN 46227

3. Project location: W ½ of Section 13 and the SE ¼ of Section 14, Township 16 North, Range 1 East, Brownsburg USGS Quad, Hendricks County, Upper White 8-Digit Hydrologic Unit Code, 05120201.
From I-74 and SR 267 exit, travel south on SR 267, turn left on US 136, turn right on Hornaday Rd.

4. Affected waterbody: John Garvey and Neal Legal Drain, and John Garvey Ditch (Unnamed Tributary to White Lick Creek.

5. Project Description: The applicant proposes to replace the existing 30" by 61' long in John Garvey and Neal Legal Drain under Hornaday Road with the same size pipe. A concrete headwall and apron will extend 3' downstream, and there will be 7' of turf reinforcement matting. The existing 66" by 36" by 60' long culvert in John Garvey Ditch Hornaday Road will be replaced with dual 30" culverts 126' in length. A concrete headwall, apron and turf reinforcement mat will be placed at the outlet for 9'. The existing 42" by 35' long culvert in John Garvey Ditch under Woodstock Drive will be replaced with dual 27" by 232' long culverts to include a concrete headwall, apron and turn reinforcement mat. Additionally, John Garvey Ditch will be regarded for approximately 1,040 linear feet beginning west of Woodstock Drive and ending approximately 260' west of Hornaday Drive. All disturbed areas will be stabilized with erosion control blankets and a swale seed mix to top of bank, and a turf grass seed mix will be used on the overbanks. The purpose of the project is to improve local drainage. For additional plans and information, please visit the IDEM Public Notice Webpage: http://www.in.gov/idem/6399.htm

Comment period: Any person or entity who wishes to submit comments or information relevant to the aforementioned project may do so by the closing date noted above. Only comments or information related to water quality or potential impacts of the project on water quality can be considered by IDEM in the water quality certification review process.

Public Hearing: Any person may submit a written request that a public hearing be held to consider issues related to water quality in connection with the project detailed in this notice. The request for a hearing should be submitted within the comment period to be considered timely. The request should also state the reason for the public hearing as specifically as possible to assist IDEM in determining whether a public hearing is warranted.

Questions? Additional information may be obtained from Mr. Brad Baldwin, Project Manager, at 317-234-5647. Please address all correspondence to the project manager and reference the IDEM project identification number listed on this notice. Indicate if you wish to receive a copy of IDEM's final decision. Written comments and inquiries may be forwarded to -

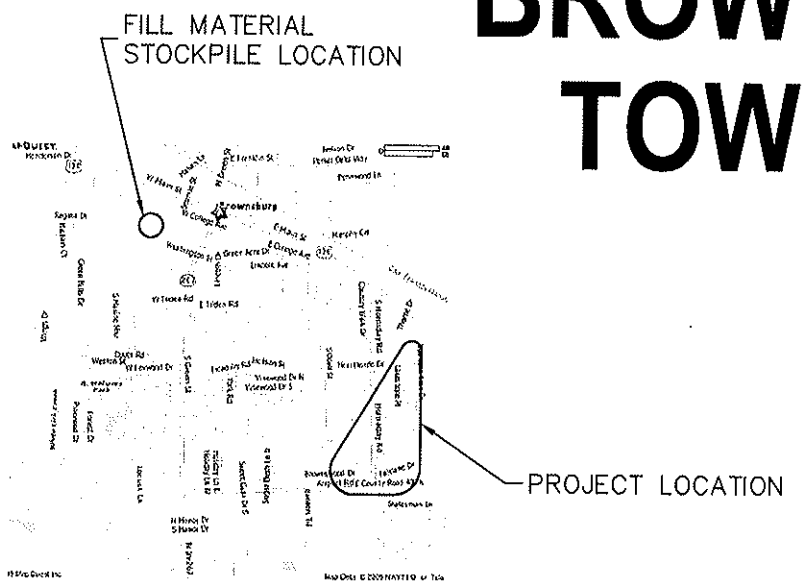
Indiana Department of Environmental Management
100 North Senate Avenue
MC65-42 WQS IGCN 1255
Indianapolis, Indiana 46204-2251
FAX: 317/232-8406

ROBINWOOD STORMW

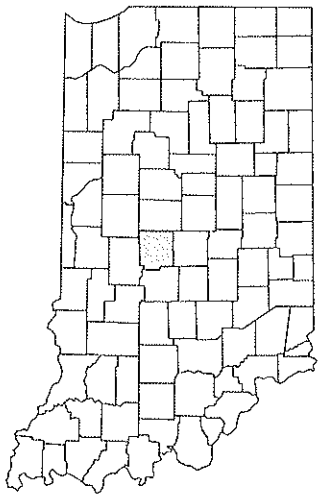
FOR

BROWNSBURG STF

TOWN OF BROWN



BROWNSBURG
VICINITY MAP
SCALE: NO SCALE



STATE LOCATION MAP
SCALE: NONE

WESSLER
ENGINEERING

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6219 South East Street
Indianapolis, Indiana 46227
Phone: 317-788-4551 - Fax: 317-788-4553
www.wesslerengineering.com

PROJECT NO. 128609.04.02

PLANS PRE

MATT BOWLES, C

BILL GUARNERY,

GARY HOOD, C

DWAYNE SAWYER,

BILL SIBBING, C

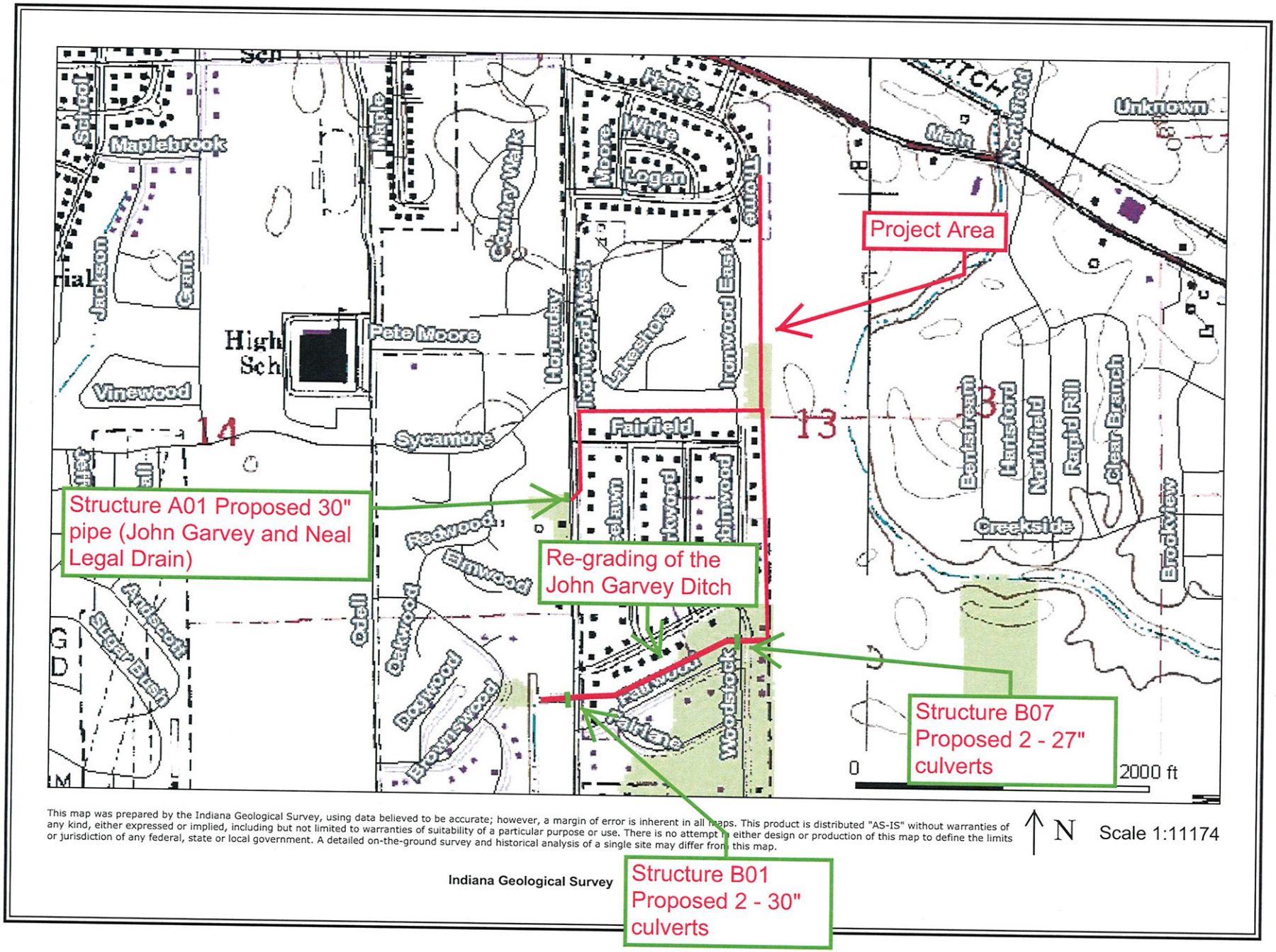
DALE CHEATHAM

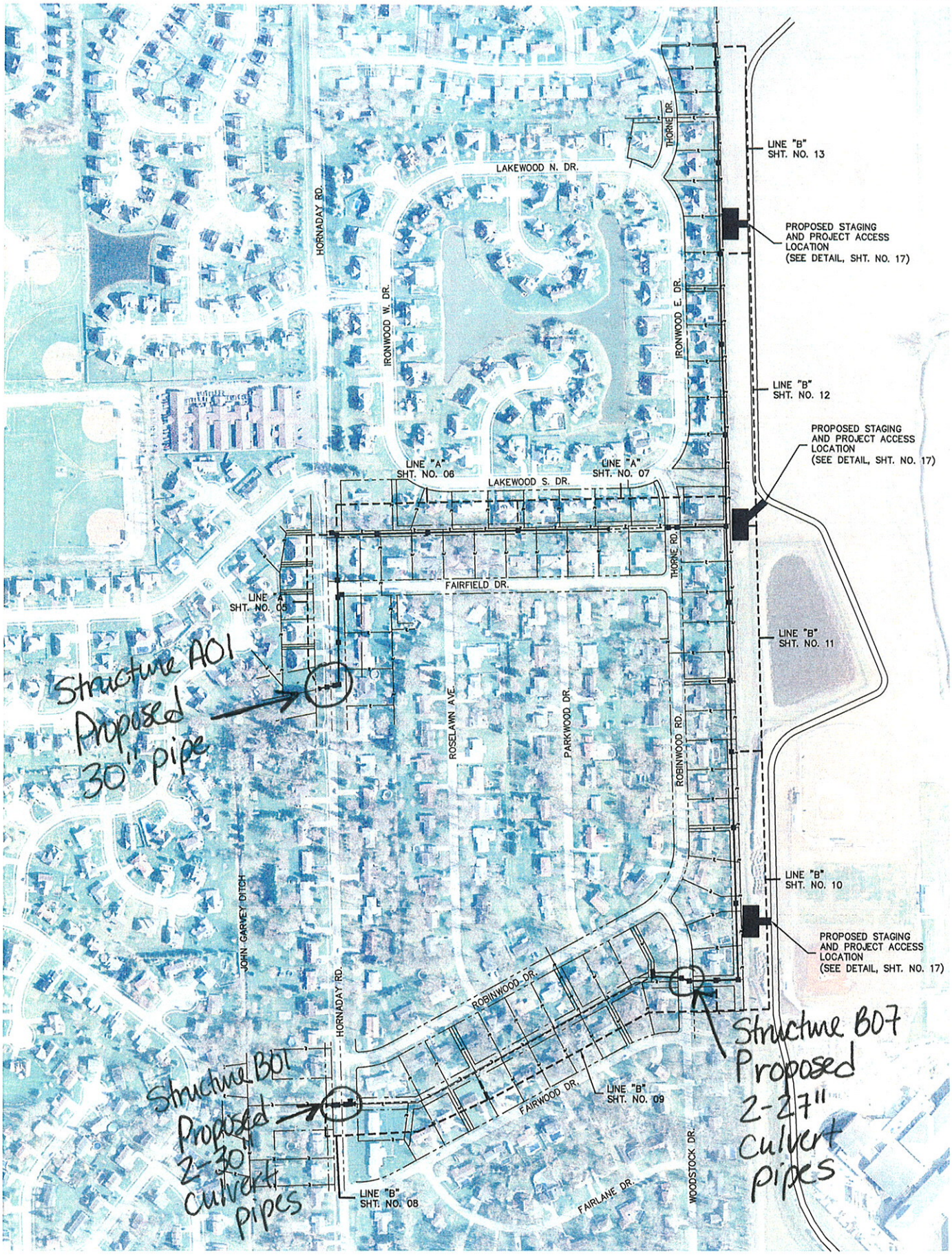
RICK BROCK, STREET DEP

SHANE RANCE, STREET DEPARTM

MAY

USGS map


Project Area
Structure A01 Proposed 30" pipe (John Garvey and Neal Legal Drain)
Re-grading of the John Garvey Ditch
Structure B07 Proposed 2 - 27" culverts
Structure B01 Proposed 2 - 30" culverts
Maplebrook
Pete Moore
Vinewood
Sycamore
Fairfield
Greekside
Unknown
0
2000 ft
N
Scale 1:11174
This map was prepared by the Indiana Geological Survey, using data believed to be accurate; however, a margin of error is inherent in all maps. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability of a particular purpose or use. There is no attempt in either design or production of this map to define the limits or jurisdiction of any federal, state or local government. A detailed on-the-ground survey and historical analysis of a single site may differ from this map.
Indiana Geological Survey



Approximate half size

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE
~~1" = 200'~~
0 100 200 400

ISSUE DATE
APRIL 2010

PROJECT NUMBER
128609.04.02

NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

CERTIFICATION

Drawings: N:\Land Projects\128609-04-01\dwg\128609-04-01-LP.dwg | Layout: LP | Plotted: 04/13/10 @ 10:53:04 | User: Jason Walker

IAL

874.00

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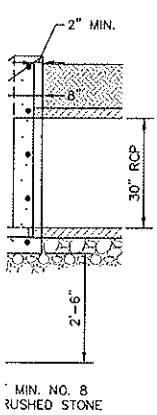
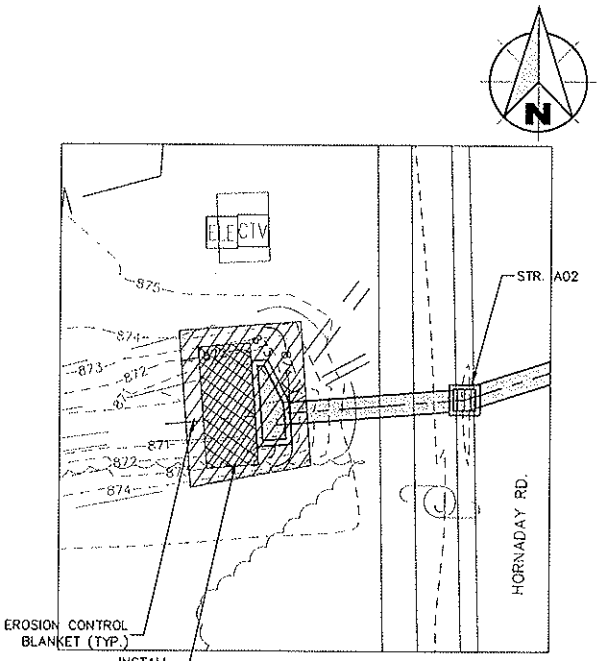


MIN. NO. 8
RUSHED STONE



STR. A–01
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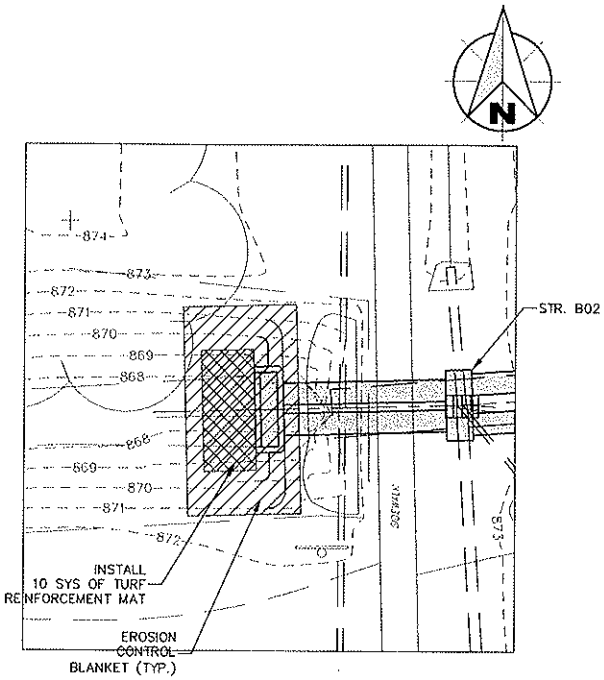

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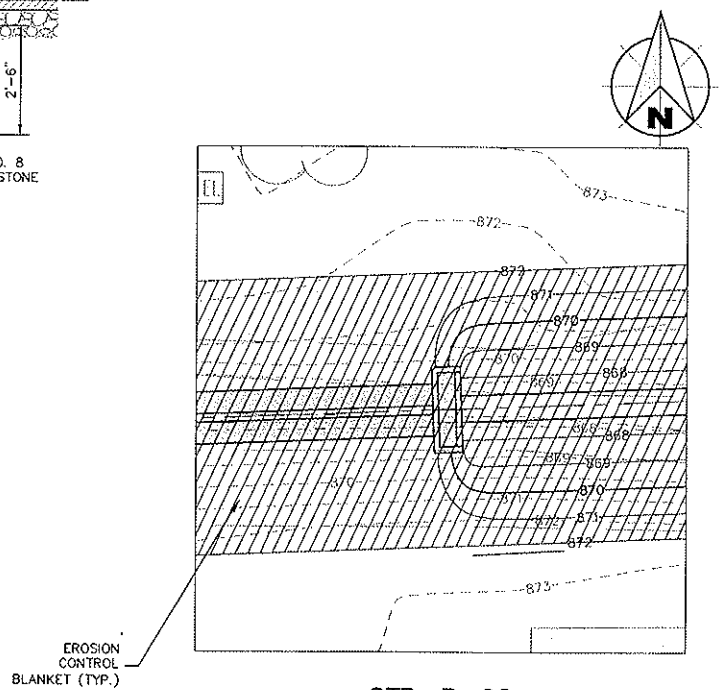

STR. B–06
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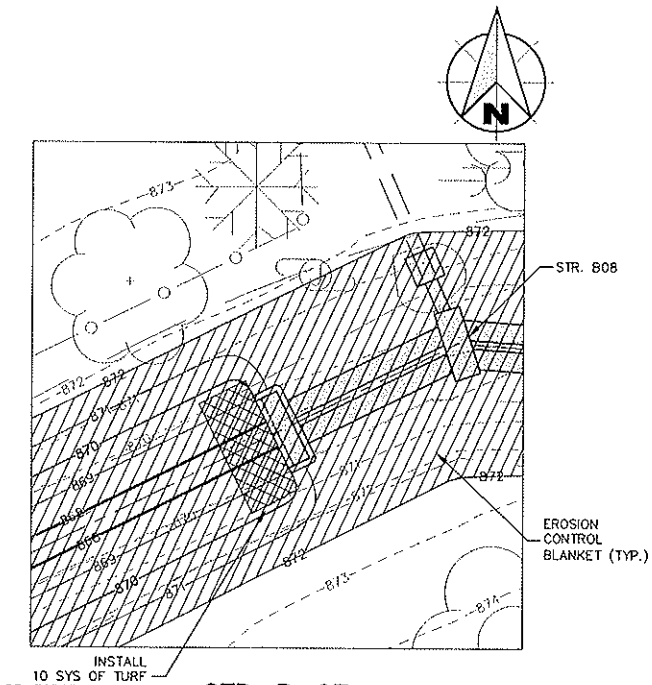

STR. B–07
SCALE: 1" = 10'

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ROBINWOOD STORMWATER IMPROVEMENTS

BROWNSBURG STREET DEPARTMENT
TOWN OF BROWNSBURG, INDIANA

MISCELLANEOUS DETAILS

DETAILS

SHEET NO. **17**

TOTAL SHEETS **26**

4. Project Purpose and Description

Purpose of project and overview of activities:

The project consists of replacing and installing storm sewers east of Hornaday Road, Thorne Drive, Ironwood East Drive, Thorne Road, and Robinwood Road, and north of Fairfield Drive to improve storm water drainage. The 30 inch pipe under Hornaday Road (Plan Sheet 5) will be replaced with a new 30 inch pipe. The 66 inch by 36 inch culvert under Hornaday Road (Plan Sheet 8) will be replaced and extended with two 30 inch culverts. The 42 inch culvert under Woodstock Road (Plan Sheet 9) will be replaced and extended with two 27 inch culverts. Culverts/pipes will be replaced, because they are either damaged or not functioning properly. These culverts/pipes will improve drainage in the area. In addition, the John Garvey Ditch between Fairwood Drive and Robinwood Drive (Plan Sheets 8, 9, 10, and 14) will be re-graded and re-established with erosion control blanket and a swale seed mix (details on Sheet 18 and 19) below the Ordinary High Water Mark (OHWM). A turf grass seed mix will be used elsewhere. Re-grading of this ditch will improve drainage in the area.

Disturbance to the ditches will be temporary in nature. Appropriate erosion control measures will be implemented. Banks where culvert/pipe replacement occurs will be stabilized with erosion control blanket. A turf reinforcement mat will be used below the OHWM to establish vegetation and prevent erosion permanently. A swale seed mix will be used below the OHWM and a turf grass seed mix will be used elsewhere. Refer to details on Sheet 17, 18, and 19.

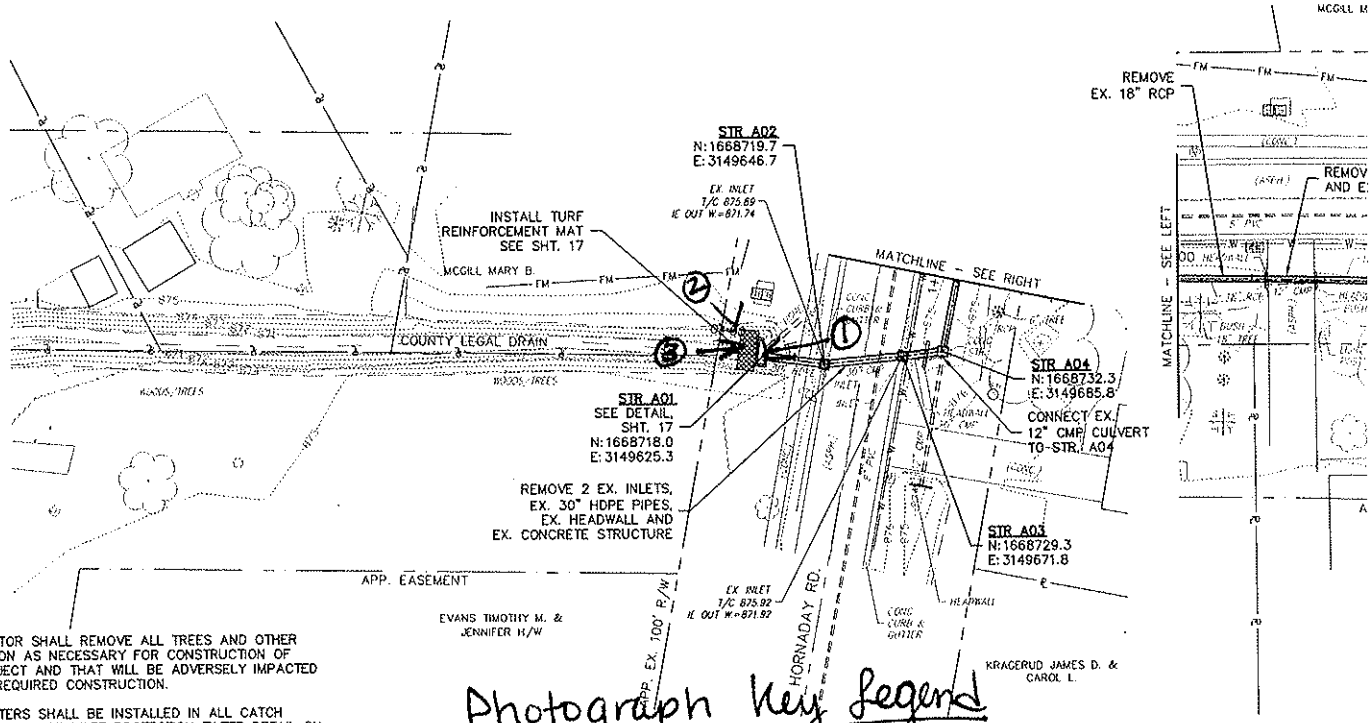
C. Bridges and Stream Crossings / D. Bank Stabilization

	Structure A01 Plan Sheet 5 (the John Garvey and Neal Legal Drain)	Structure B01 - B06 Plan Sheet 8 (John Garvey Ditch)	Re-grading of the John Garvey Ditch Plan Sheets 8, 9, 10, and 14	Structure B07 - B09 Plan Sheet 9 (John Garvey Ditch)
Description of impact	The replacement of the pipe at this location does not disturb the OHWM. The OHWM does not continue into the existing pipe. The replacement of the pipe will disturb soils along the slopes of the ditch and below the OHWM located at the outfall end of the pipe. Below the OHWM and along the side slopes of the ditch (downstream of the new pipe), erosion control blanket, a turf reinforcement mat, and a swale seed mix will be used to stabilize slopes and establish vegetation.	The 66 inch by 36 inch culvert will be replaced and extended with two 30 inch culverts. The OHWM extends into the culvert pipe. After replacement, crushed stone will be used as backfill under the pipe. Below the OHWM and along the side slopes of the ditch (downstream of the new pipe), erosion control blanket, a turf reinforcement mat, and a swale seed mix will be used to stabilize slopes and establish vegetation.	The John Garvey Ditch will be re-graded and re-established with erosion control blanket and a swale seed mix below the OHWM and along the side slopes of the ditch to properly restore the ditch to its natural vegetation. The OHWM ends along the John Garvey Ditch just east of Woodstock Drive (approximate station 14+00 on Line B).	The 42 inch culvert will be replaced and extended with two 27 inch culverts. The OHWM extends into the pipe. After replacement, crushed stone will be used as backfill under the pipe. Below the OHWM and along the side slopes of the ditch (downstream of the new pipe), erosion control blanket, a turf reinforcement mat, and a swale seed mix will be used to stabilize slopes and establish vegetation.
Length of upstream bank impacts	Left: 0 feet Right: 0 feet (Pipe is enclosed upstream)	Left: 60 feet Right: 60 feet	Left: 0 feet Right: 0 feet	Left: 85 feet Right: 85 feet
Length of downstream bank impacts	Left: 10 feet Right: 10 feet	Left: 270 feet Right: 270 feet	Left: 1,040 feet Right: 1,040 feet	Left: 112 feet Right: 112 feet

C. Bridges and Stream Crossings / D. Bank Stabilization

	Structure A01 Plan Sheet 5 (the John Garvey and Neal Legal Drain)	Structure B01 - B06 Plan Sheet 8 (John Garvey Ditch)	Re-grading of the John Garvey Ditch Plan Sheets 8, 9, 10, and 14	Structure B07 - B09 Plan Sheet 9 (John Garvey Ditch)
Description of impact	The replacement of the pipe at this location does not disturb the OHWM. The OHWM does not continue into the existing pipe. The replacement of the pipe will disturb soils along the slopes of the ditch and below the OHWM located at the outfall end of the pipe. Below the OHWM and along the side slopes of the ditch (downstream of the new pipe), erosion control blanket, a turf reinforcement mat, and a swale seed mix will be used to stabilize slopes and establish vegetation.	The 66 inch by 36 inch culvert will be replaced and extended with two 30 inch culverts. The OHWM extends into the culvert pipe. After replacement, crushed stone will be used as backfill under the pipe. Below the OHWM and along the side slopes of the ditch (downstream of the new pipe), erosion control blanket, a turf reinforcement mat, and a swale seed mix will be used to stabilize slopes and establish vegetation.	The John Garvey Ditch will be re-graded and re-established with erosion control blanket and a swale seed mix below the OHWM and along the side slopes of the ditch to properly restore the ditch to its natural vegetation. The OHWM ends along the John Garvey Ditch just east of Woodstock Drive (approximate station 14+00 on Line B).	The 42 inch culvert will be replaced and extended with two 27 inch culverts. The OHWM extends into the pipe. After replacement, crushed stone will be used as backfill under the pipe. Below the OHWM and along the side slopes of the ditch (downstream of the new pipe), erosion control blanket, a turf reinforcement mat, and a swale seed mix will be used to stabilize slopes and establish vegetation.
Length of upstream bank impacts	Left: 0 feet Right: 0 feet (Pipe is enclosed upstream)	Left: 60 feet Right: 60 feet	Left: 0 feet Right: 0 feet	Left: 85 feet Right: 85 feet
Length of downstream bank impacts	Left: 10 feet Right: 10 feet	Left: 270 feet Right: 270 feet	Left: 1,040 feet Right: 1,040 feet	Left: 112 feet Right: 112 feet

	Structure A01 Plan Sheet 5 (the John Garvey and Neal Legal Drain)	Structure B01 - B06 Plan Sheet 8 (John Garvey Ditch)	Re-grading of the John Garvey Ditch Plan Sheets 8, 9, and 14	Structure B07 - B09 Plan Sheet 9 (John Garvey Ditch)
Bank protection fill placed below the OHWM (Volume per running foot)	Pipe will be replaced. No fill will be placed below the OHWM. Downstream of the pipe natural vegetation will be used to restore the ditch.	Pipe will be replaced and extended. No fill will be placed below the OHWM. Downstream of the pipe natural vegetation will be used to restore the ditch.	Only re-grading of the ditch will occur at this location. Natural vegetation (using a swale seed mix) will be used to restore the ditch.	Pipe will be replaced and extended. No fill will be placed below the OHWM. Downstream of the pipe natural vegetation will be used to restore the ditch.
Bank protection fill placed below the OHWM (Area of coverage)	Pipe will be replaced. No fill will be placed below the OHWM. Downstream of the pipe natural vegetation will be used to restore the ditch. 10.8 square yards will be disturbed and restored.	Pipe will be replaced and extended. No fill will be placed below the OHWM. Downstream of the pipe natural vegetation will be used to restore the ditch. 288 square yards will be disturbed and restored.	Only re-grading of the ditch will occur at this location. Natural vegetation (using a swale seed mix) will be used to restore the ditch. 1,800 square yards will be disturbed and restored.	Pipe will be replaced and extended. No fill will be placed below the OHWM. 180 square yards will be disturbed and restored.

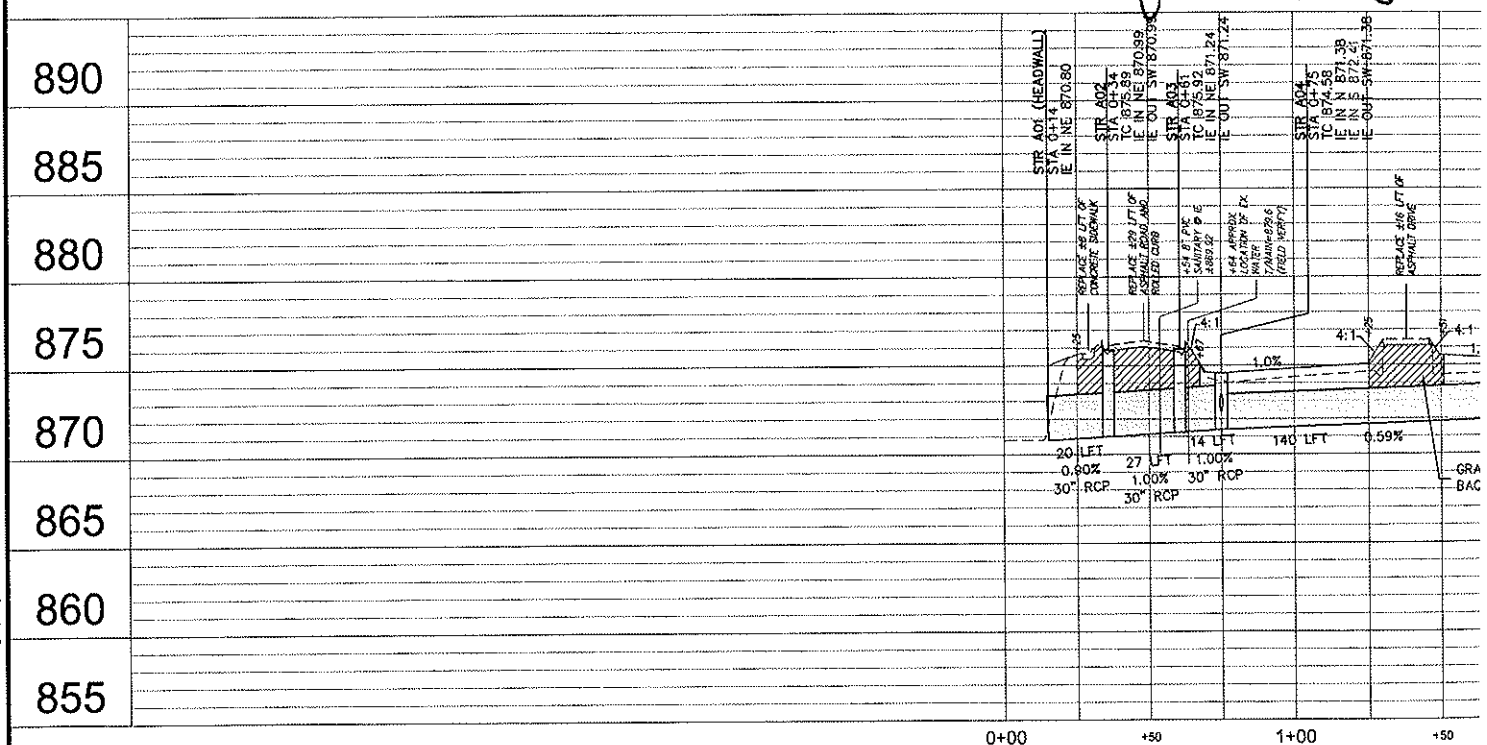


NOTE:
1. CONTRACTOR SHALL REMOVE ALL TREES AND OTHER VEGETATION AS NECESSARY FOR CONSTRUCTION OF THE PROJECT AND THAT WILL BE ADVERSELY IMPACTED BY THE REQUIRED CONSTRUCTION.
2. INLET FILTERS SHALL BE INSTALLED IN ALL CATCH BASIN INLETS, SEE INLET PROTECTION FILTER DETAIL ON SHEET 18.
3. REFER TO EROSION CONTROL NOTES FOR CONCRETE WASHOUT ON SHEET 18.

Photograph Key Legend

① → location and direction of each photograph

PLAN – DR.



PROFILE – D

HORIZ.
VERT.

Approximate Half size

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE
~~1" = 30'~~
0 15 30 60

ISSUE DATE
APRIL 2010

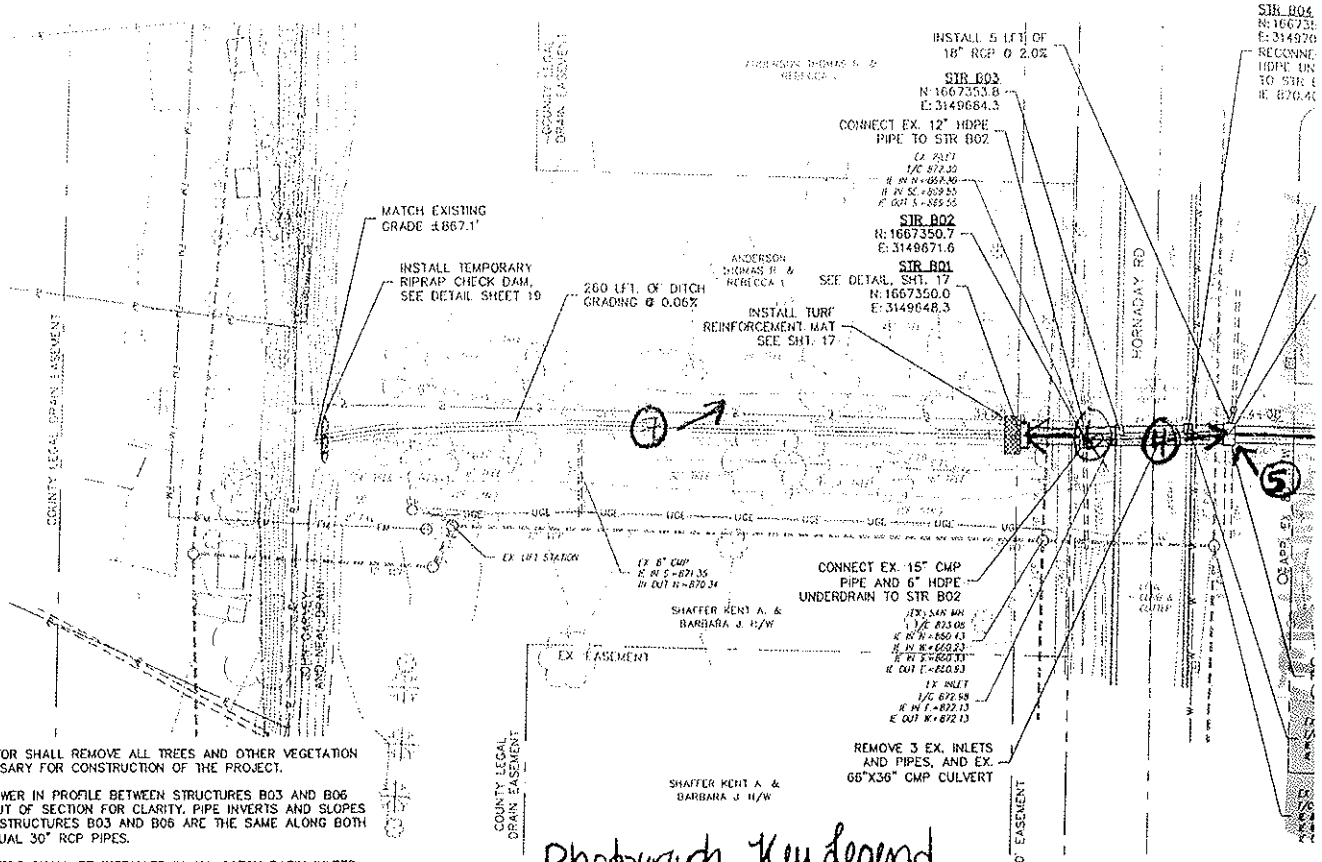
PROJECT NUMBER
128609.04.02

NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

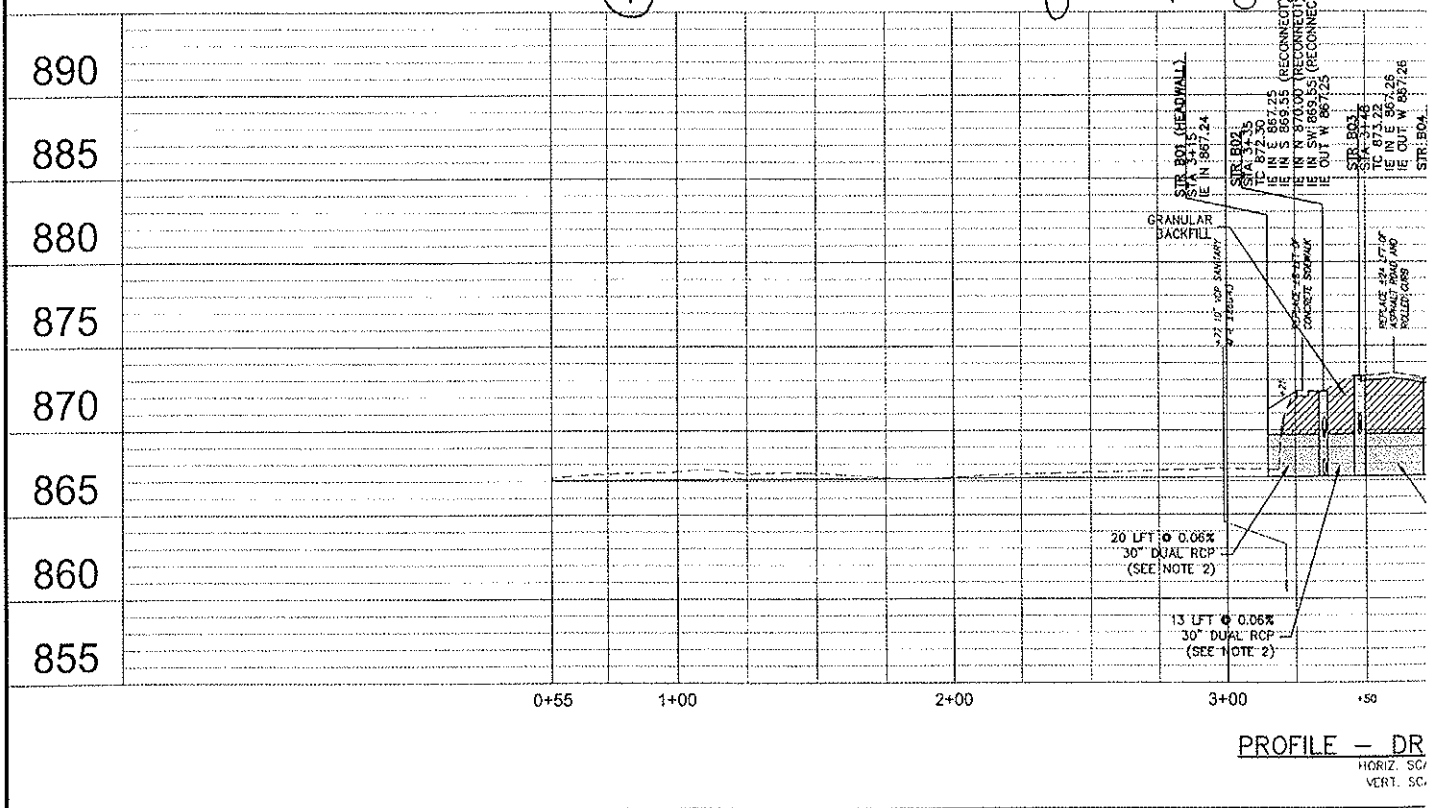
Sheet No. 5

Drawing: N:\Land Projects\128609-04-01\dwg\128609-04-01-PP-A-REV.dwg | Layout: LA01 | Plotted: 04/13/10 @ 10:47:20 | User: Jason Walker



NOTE:
1. CONTRACTOR SHALL REMOVE ALL TREES AND OTHER VEGETATION AS NECESSARY FOR CONSTRUCTION OF THE PROJECT.
2. STORM SEWER IN PROFILE BETWEEN STRUCTURES B03 AND B06 SHOWN OUT OF SECTION FOR CLARITY. PIPE INVERTS AND SLOPES BETWEEN STRUCTURES B03 AND B06 ARE THE SAME ALONG BOTH OF THE DUAL 30" RCP PIPES.
3. INLET FILTERS SHALL BE INSTALLED IN ALL CATCH BASIN INLETS. SEE INLET PROTECTION FILTER DETAIL ON SHEET 18.
4. REFER TO EROSION CONTROL NOTES FOR CONCRETE WASHOUT ON SHEET 18.

PLAN – DRAI
SCALE:



PROFILE – DR
HORIZ. SC
VERT. SC

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE: 1" = 30'

ISSUE DATE: MAY 2010

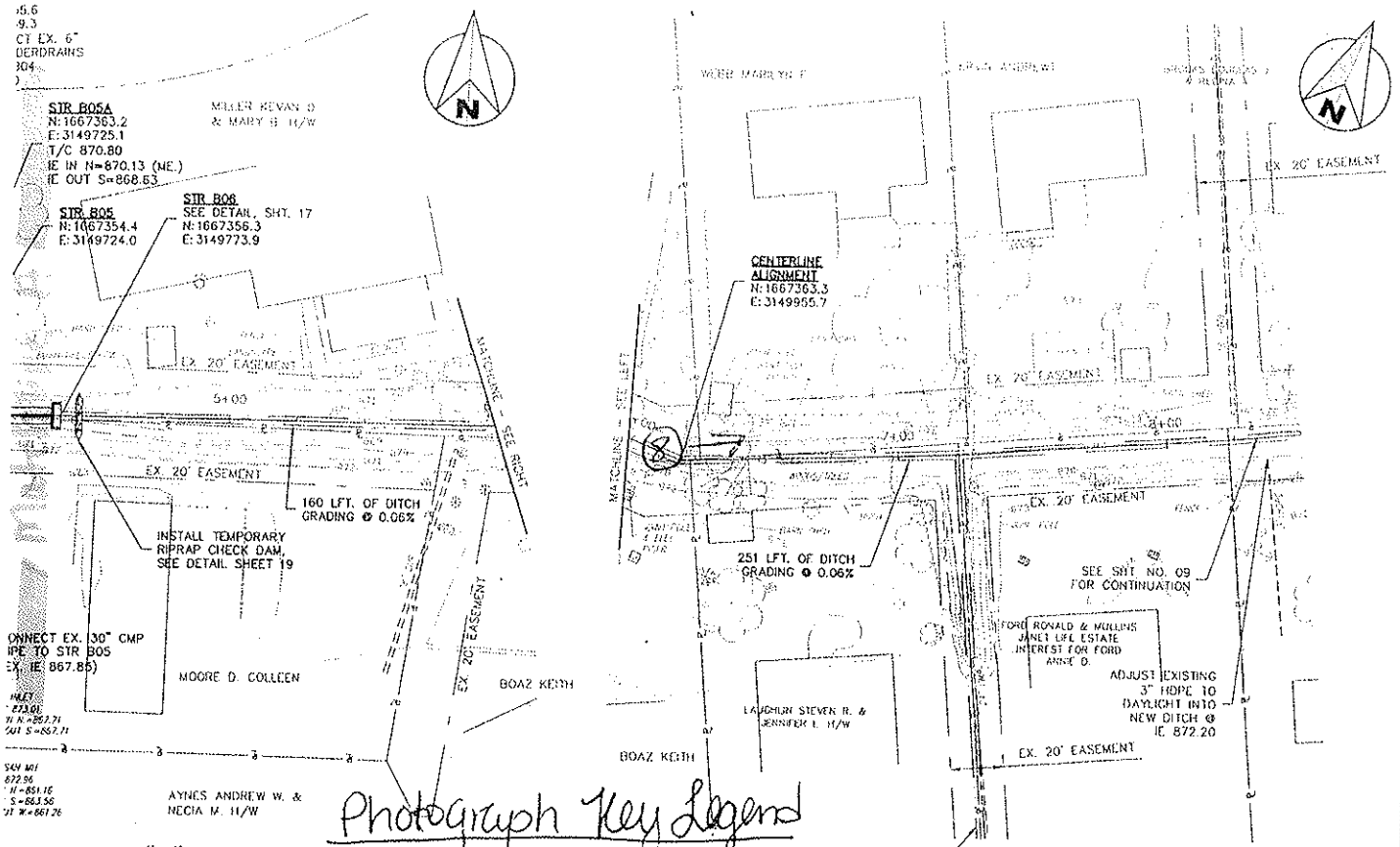
PROJECT NUMBER: 128609.04.02

NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

Approximate half size ←

Sheet No. 8

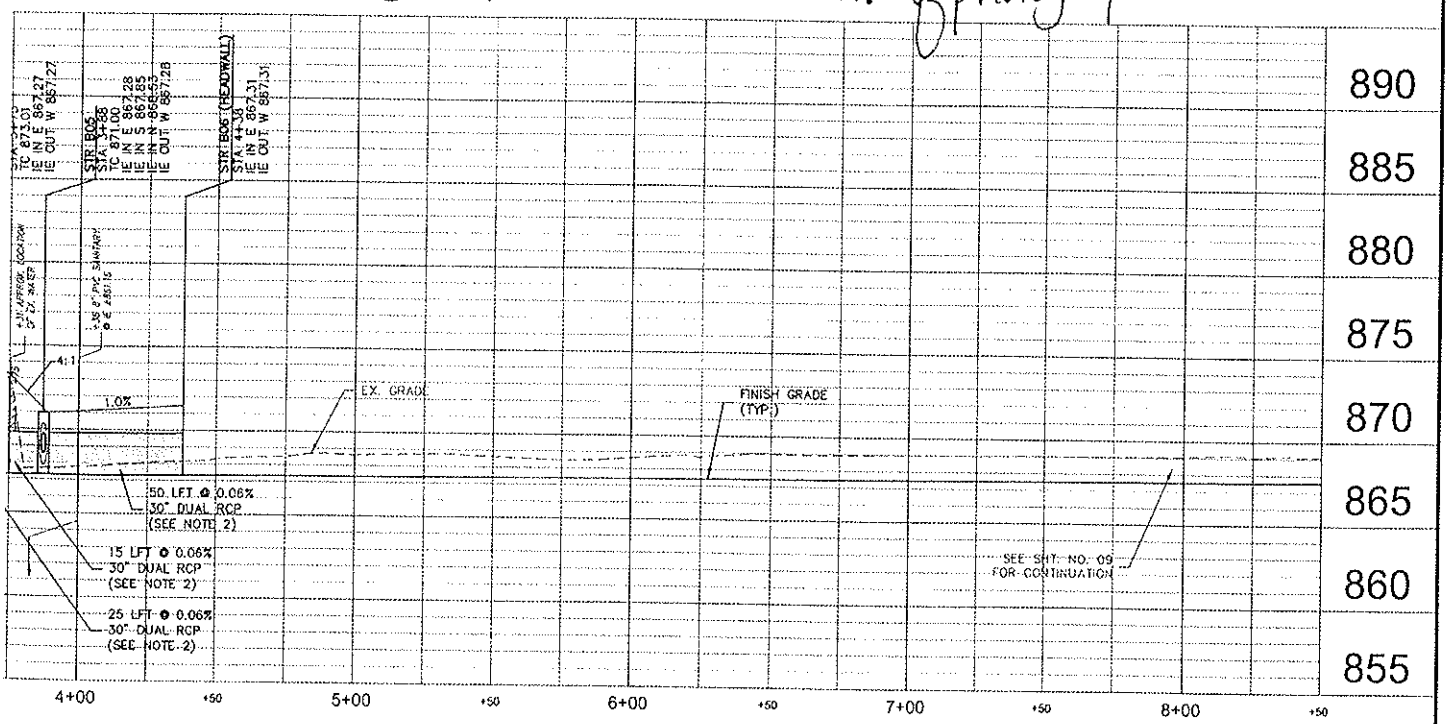


Photograph Key Legend

⑧ → location and direction of photograph

NAGE LINE "B"

1" = 30'



NAGE LINE "B"

E: 1" = 30'

E: 1" = 5'

CERTIFICATION

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ROBINWOOD STORMWATER IMPROVEMENTS

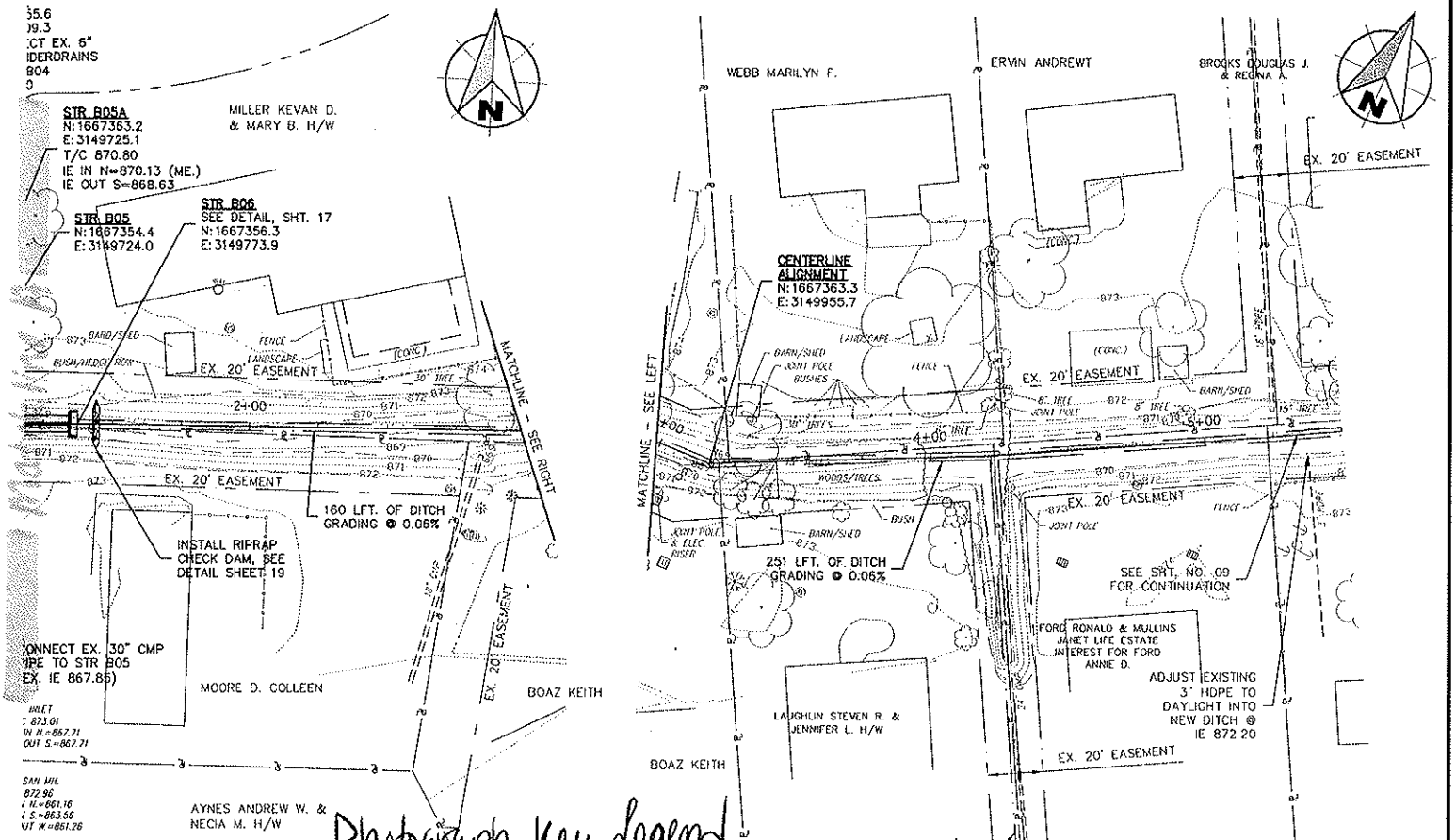
BROWNSBURG STREET DEPARTMENT

TOWN OF BROWNSBURG, INDIANA

DRAINAGE LINE "B"
FROM STR. B01 TO STR. B06
PLAN & PROFILE

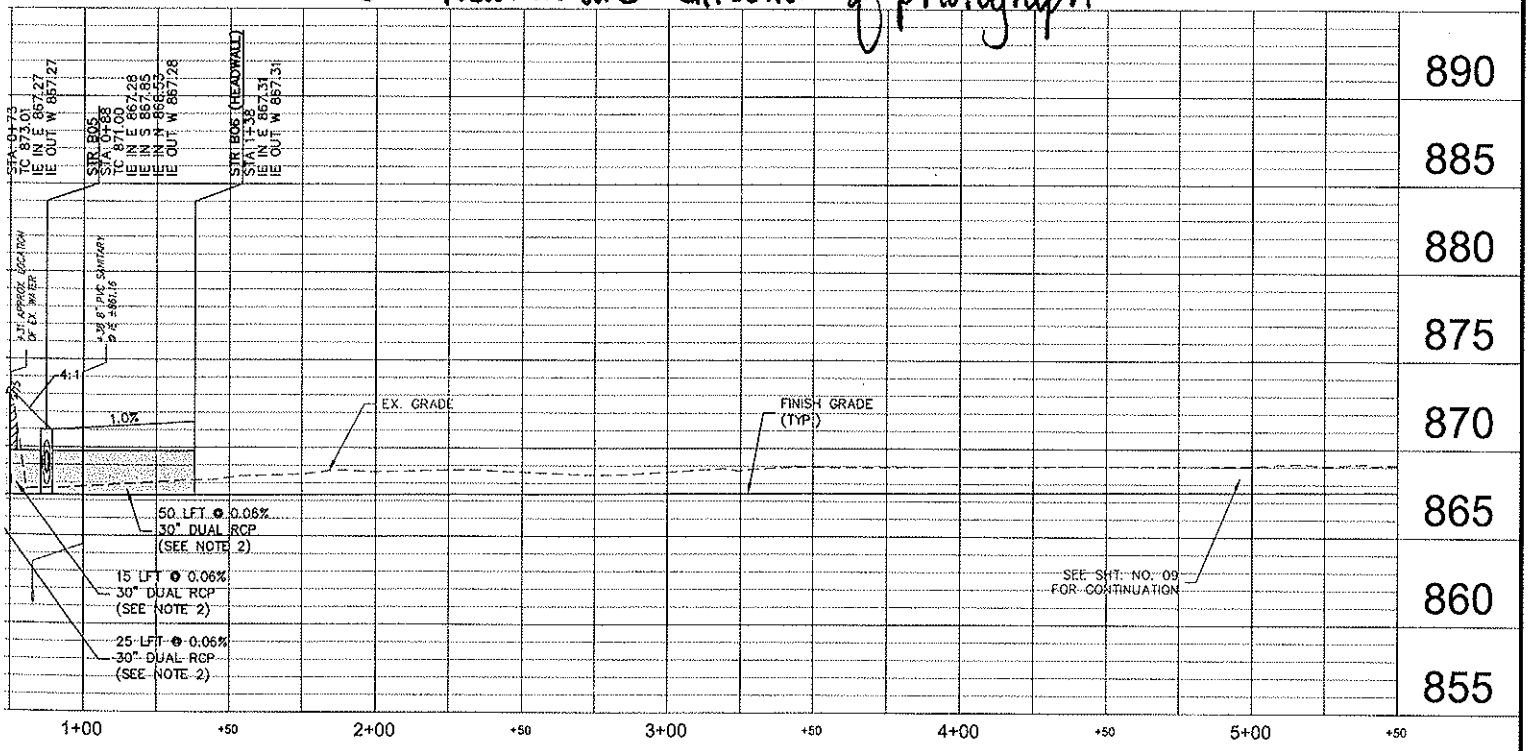
SHEET NO. **08**

TOTAL SHEETS 27



NAGE LINE "B"
1" = 30'

Photograph key legend
⑧→ location and direction of photograph



AINAGE LINE "B"
LE: 1" = 30'
LE: 1" = 5'

CERTIFICATION

WESSLER ENGINEERING
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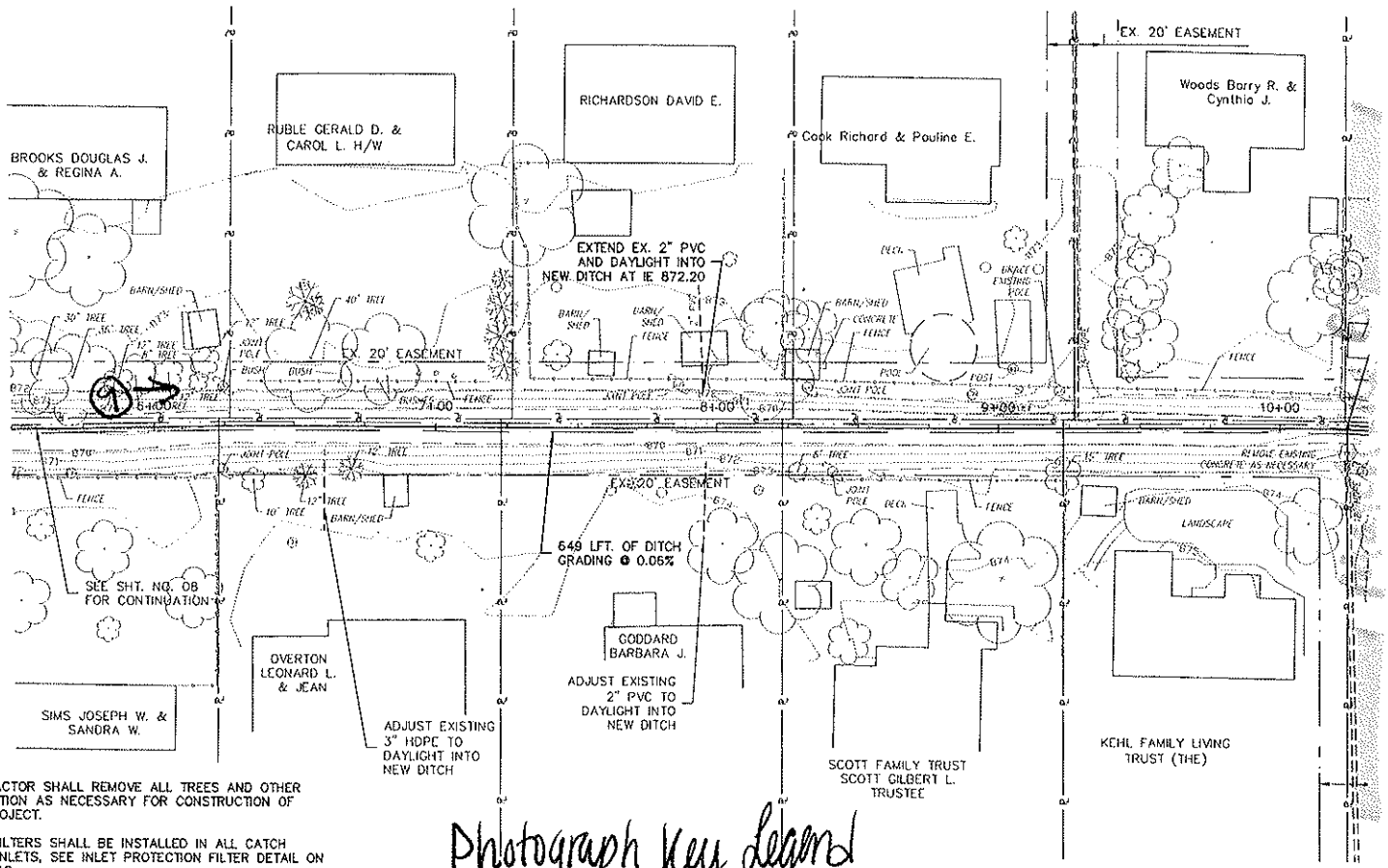
ROBINWOOD STORMWATER IMPROVEMENTS

BROWNSBURG STREET DEPARTMENT
TOWN OF BROWNSBURG, INDIANA

DRAINAGE LINE "B"
FROM STR. B01 TO STR. B06
PLAN & PROFILE

SHEET NO. **08**

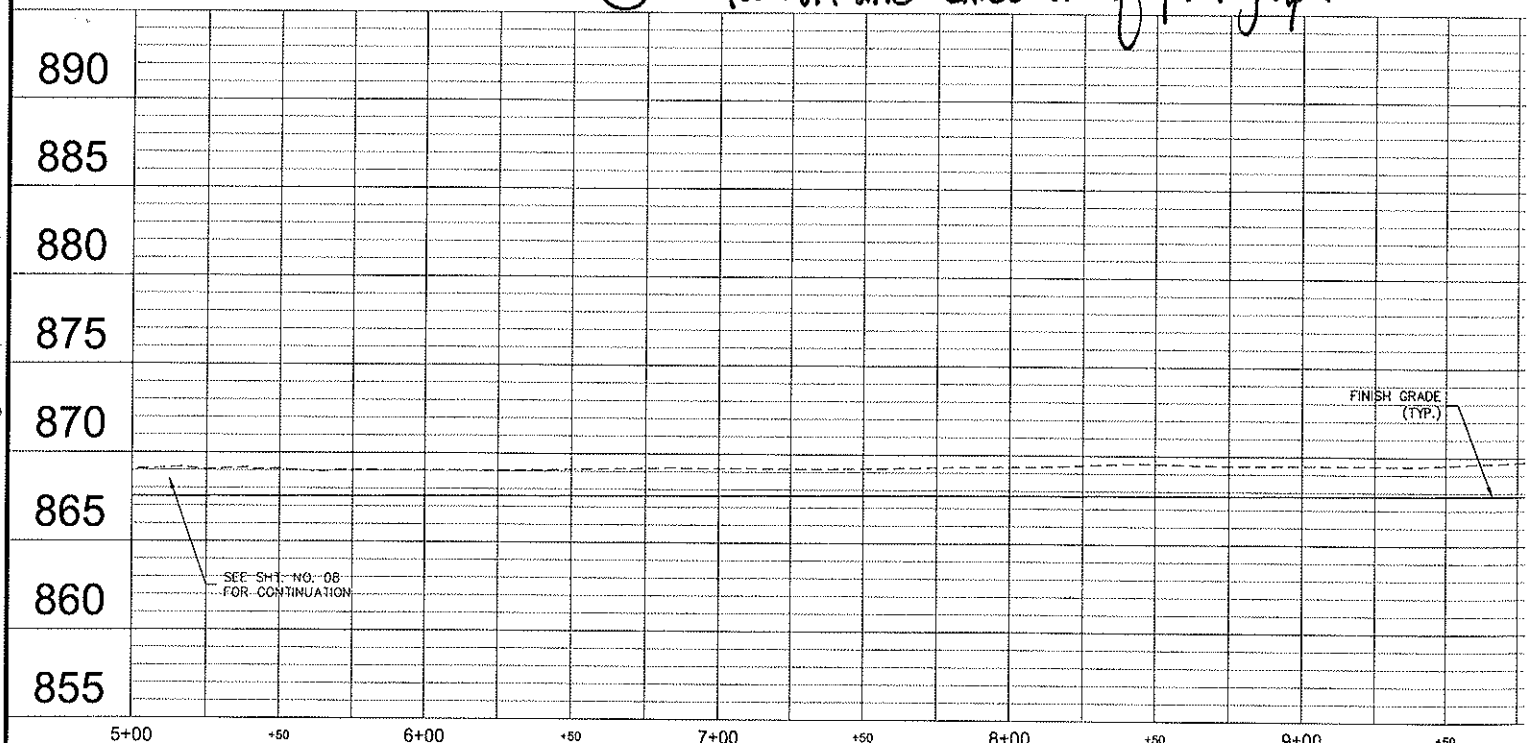
TOTAL SHEETS 26



NOTE:
1. CONTRACTOR SHALL REMOVE ALL TREES AND OTHER VEGETATION AS NECESSARY FOR CONSTRUCTION OF THE PROJECT.
2. INLET FILTERS SHALL BE INSTALLED IN ALL CATCH BASIN INLETS, SEE INLET PROTECTION FILTER DETAIL ON SHEET 18.
3. REFER TO EROSION CONTROL NOTES FOR CONCRETE WASHOUT ON SHEET 18.

Photograph Key Legend
(9) → location and direction of photograph

PLAN – DRAIN
SCALE: 1"



PROFILE – DRAI
HORIZ. SCALE
VERT. SCALE

Approximate half size

Sheet No 9

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE
~~1" = 30'~~
0 15 30 60

ISSUE DATE
MAY 2010

PROJECT NUMBER
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NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

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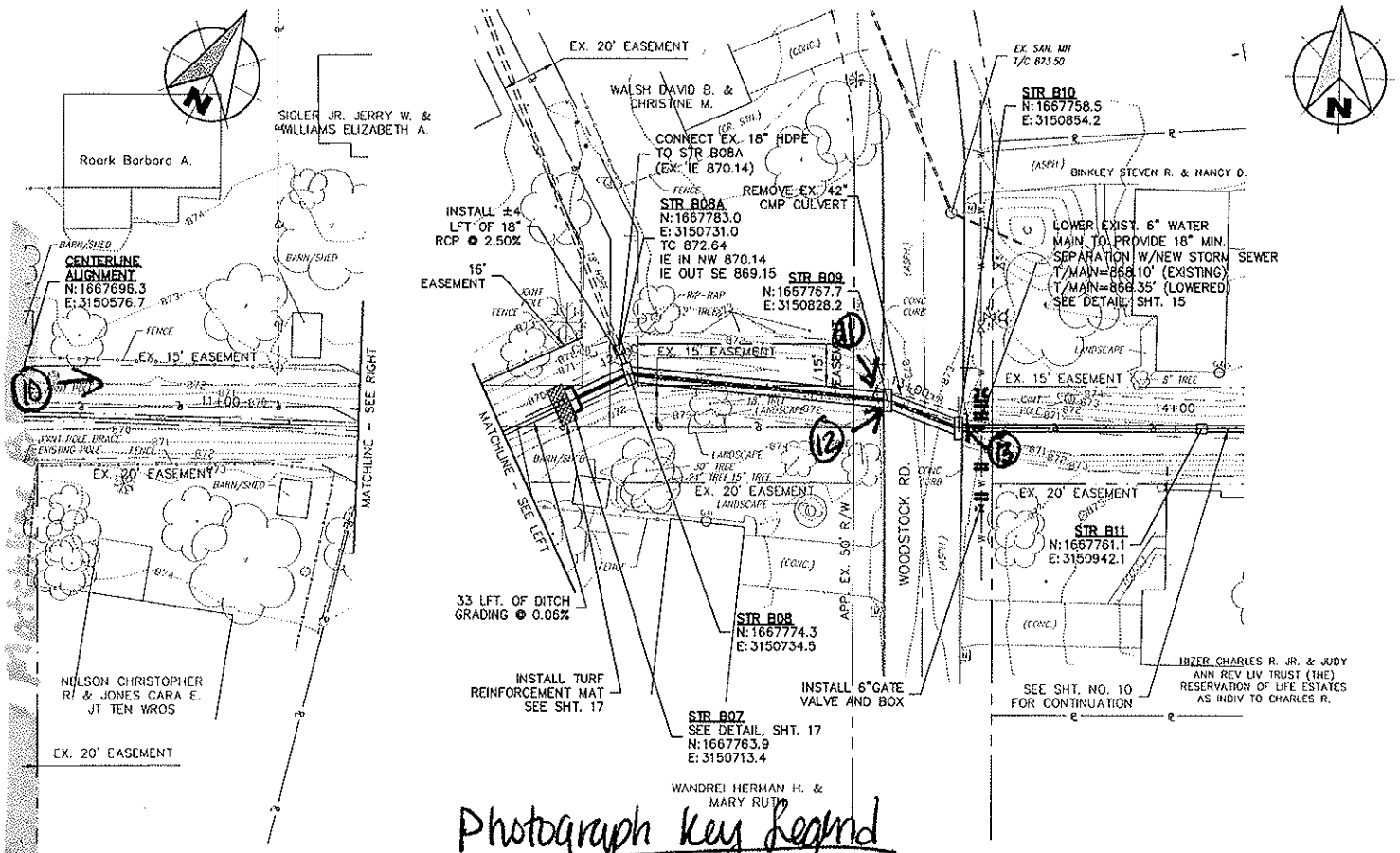

Photograph Key Legend

(10) → location and direction of each photograph

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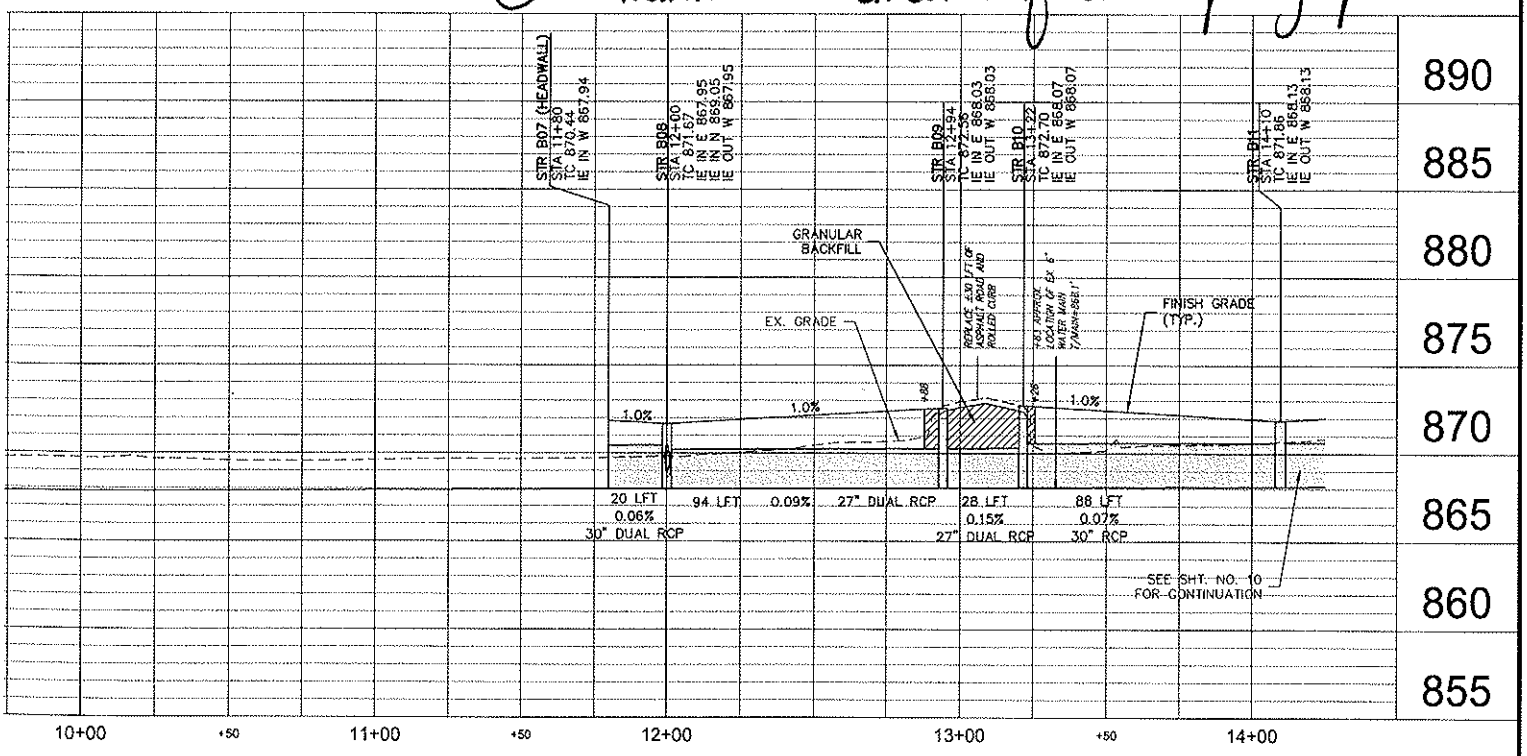
1" = 30'



AINAGE LINE "B"
.E: 1" = 30'
LE: 1" = 5'

CERTIFICATION

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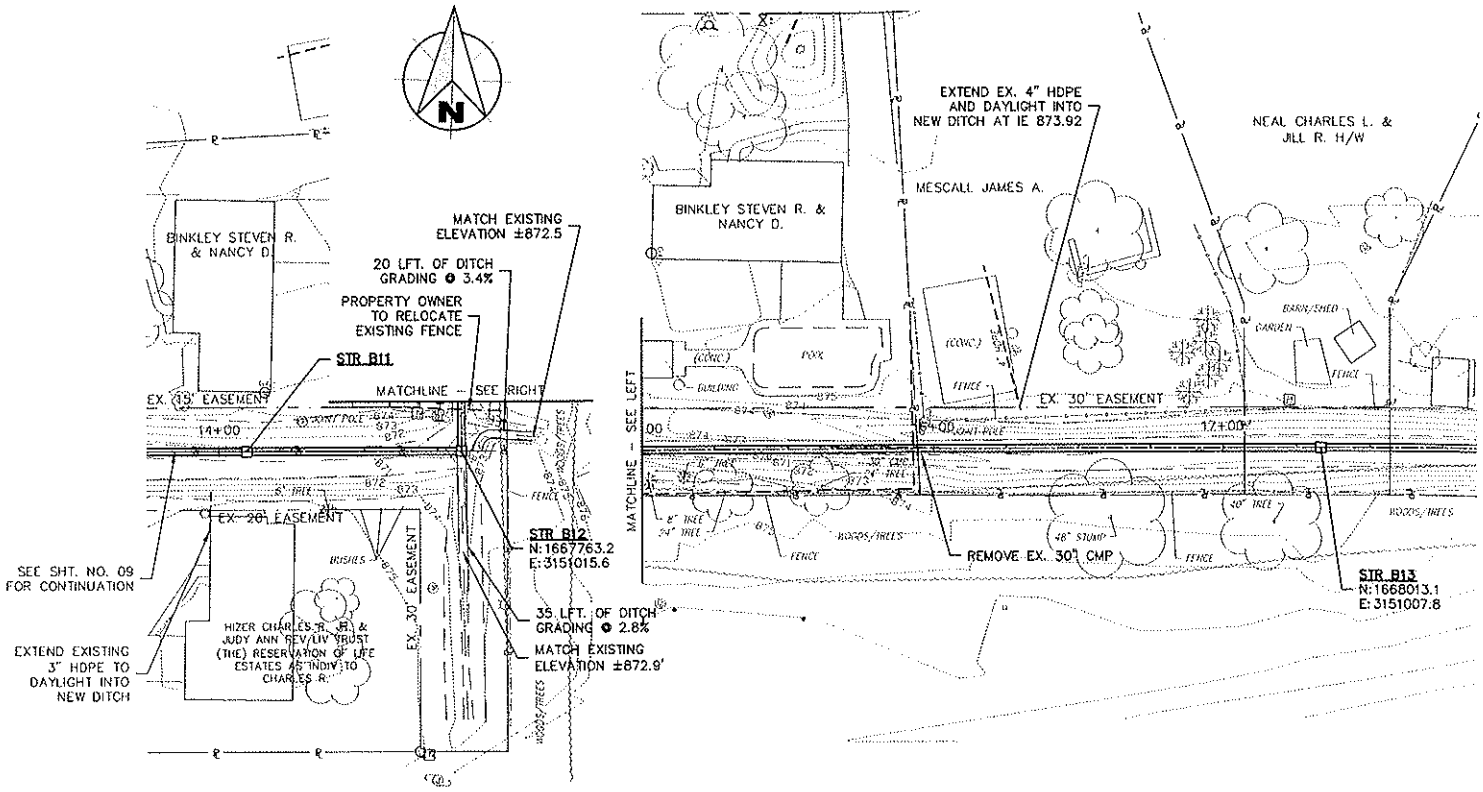
ROBINWOOD STORMWATER IMPROVEMENTS

BROWNSBURG STREET DEPARTMENT
TOWN OF BROWNSBURG, INDIANA

DRAINAGE LINE "B"
FROM STR. B07 TO STR. B11
PLAN & PROFILE

SHEET NO. **09**

TOTAL SHEETS 26



NOTE:

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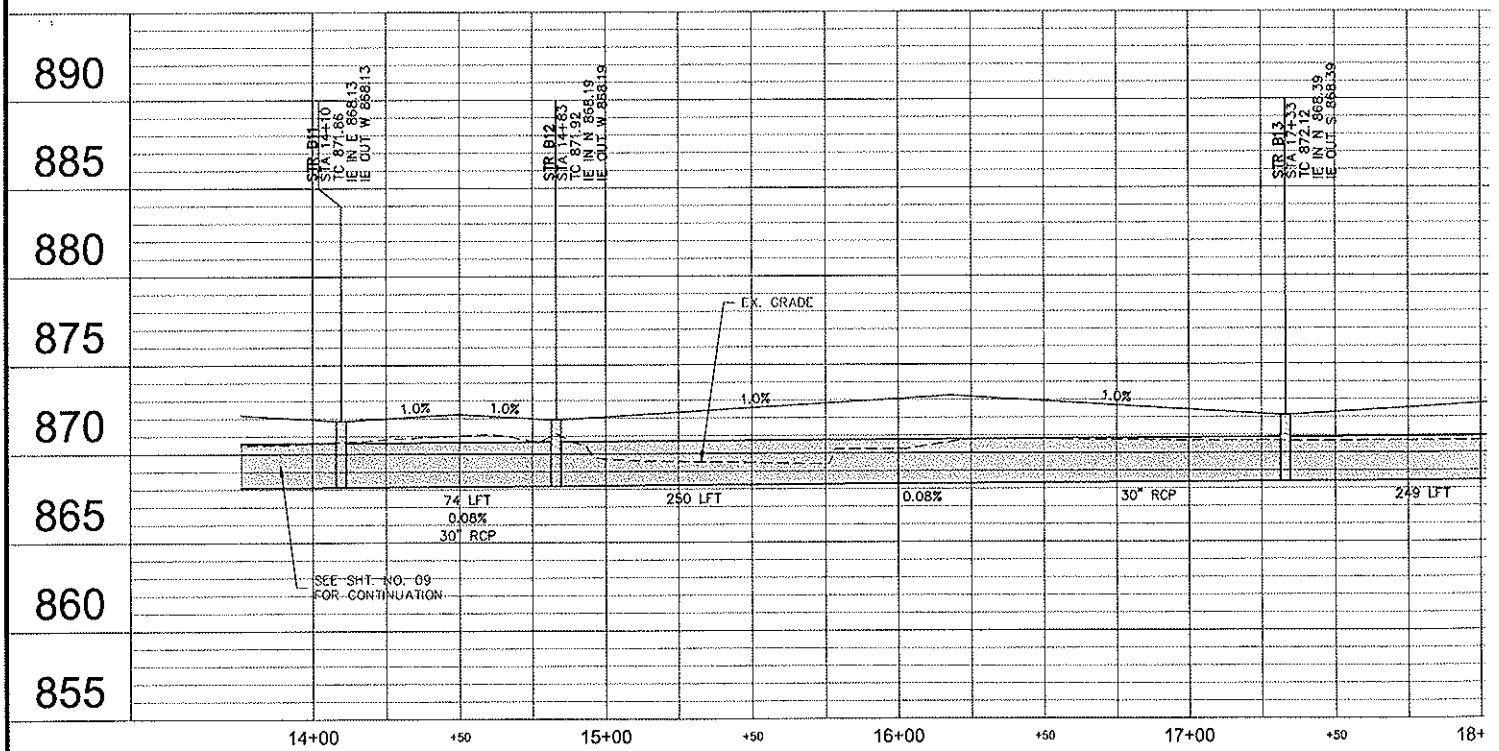
PLAN – DR

SCAL



PROFILE – D

HORIZ.

VERT.

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE

~~1" = 30'~~

0 15 30 60

ISSUE DATE

MAY 2010

PROJECT NUMBER

128609.04.02

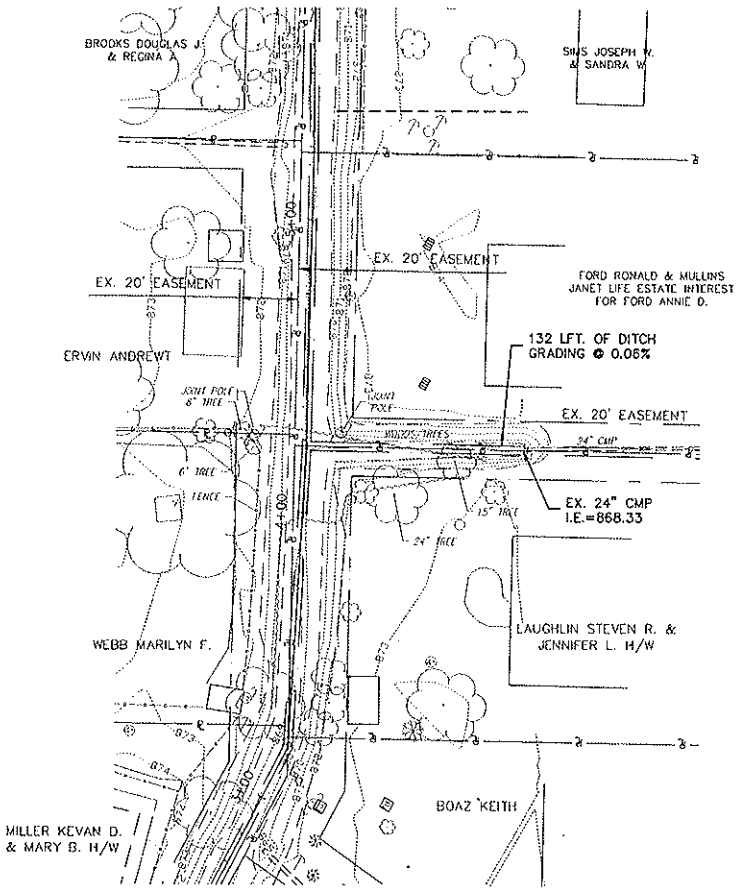
NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

Approximate Half size

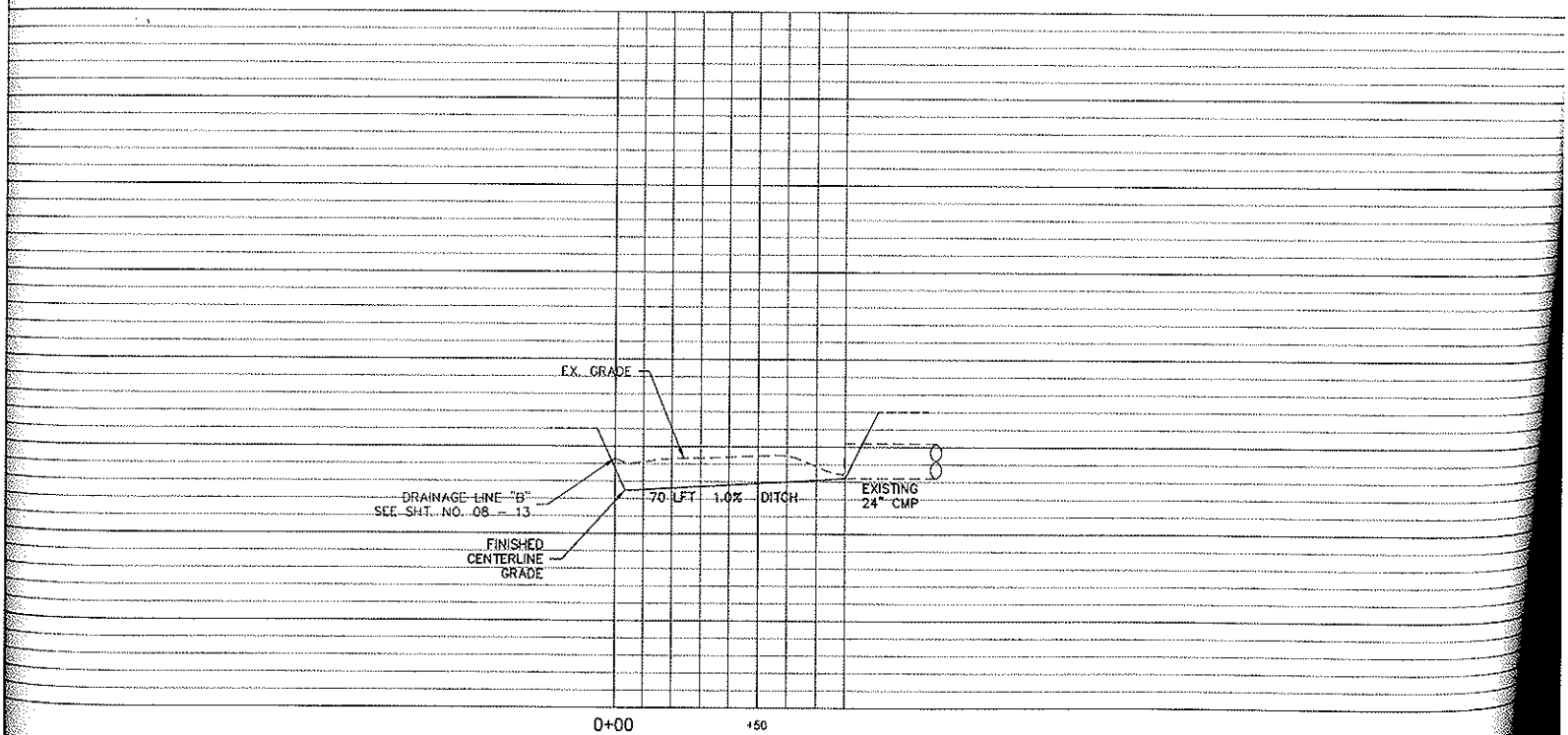
Sheet No. 10

Drawing: N:\Land Projects\128609-04-01\dwg\128609-04-01-PP-B-REV.dwg | Layout: LB03 | Plotted: 04/19/10 @ 03:00:00 | User: Jason Walker



PLAN – DRAINAGE LINE "B1"

SCALE: 1" = 30'



PROFILE – DRAINAGE LINE "B1"

HORIZ. SCALE: 1" = 30'

VERT. SCALE: 1" = 5'

APPROVED BY	NO.	DATE	INITIALS	DESCRIPTION
D.E.D.				
12				

REVISIONS

CERTIFICATION

WESSLER ENGINEERING

More than a Project™

ROBINWOOD STORM

BROWNSBURG

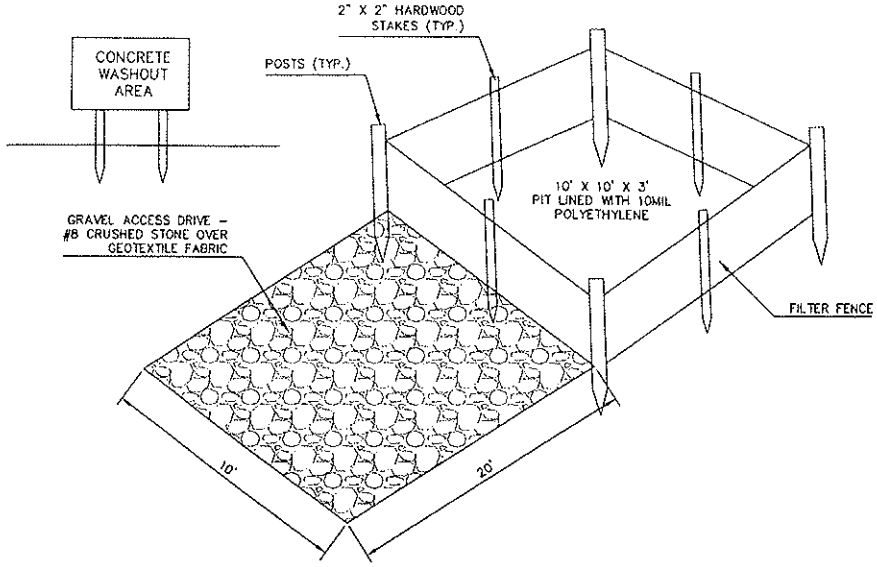
TOWN OF BR

DRAIN

EXIST

PLA

Sheet No 14



CONCRETE WASHOUT DETAIL

SCALE: NONE

CONCRETE WASHOUT NOTES:

1. FILTER FENCE SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:
   FILTER EFFICIENCY: 75% (MIN.)
   TENSILE STRENGTH AT 20% (MAX.) ELONGATION:
   EXTRA STRENGTH – 50 LBS./LIN. IN. (MIN.)
   STANDARD STRENGTH – 30 LBS./LIN. IN.
   FLOW RATE: 0.3 GAL./SQ. FT./MIN. (MIN.)
2. POLYETHYLENE SHEETING SHALL BE A MINIMUM OF 10 MIL AND FREE OF TEARS, HOLES, AND OTHER DEFECTS. THE POLYETHYLENE LINING SHALL BE OF ADEQUATE SIZE TO EXTEND OVER THE CONTAINMENT AREA.
3. BURLAP SHALL BE 10 OUNCE PER SQUARE YARD FABRIC.
4. POSTS FOR FILTER FENCES SHALL BE EITHER 4-INCH DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
5. STAKES FOR FILTER FENCES SHALL BE 2" x 2" WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
6. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.

WASHOUT PROCEDURES:

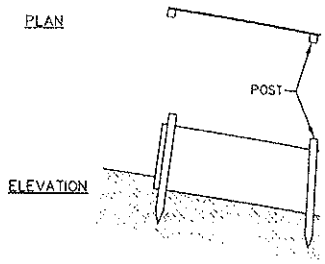
1. DO NOT LEAVE EXCESS MUD IN THE CHUTES OR HOPPER AFTER POURING CONCRETE. EVERY EFFORT SHALL BE MADE TO EMPTY THE CHUTE AND HOPPER AT THE POUR. THE LESS MATERIAL LEFT IN THE CHUTES AND HOPPER, THE QUICKER AND EASIER THE CLEANOUT. SMALL AMOUNTS OF EXCESS CONCRETE (NOT WASHOUT WATER) MAY BE DISPOSED OF IN AREAS THAT WILL NOT FLOW TO AN AREA THAT IS TO BE PROTECTED. UTILIZE
2. AT THE WASHOUT LOCATION, SCRAPE AS MUCH MATERIAL FROM THE CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON-WATER CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE. REMOVE AS MUCH MUD AS POSSIBLE WHEN WASHING OUT.
3. STOP WASHING OUT IN AN AREA IF YOU OBSERVE WATER RUNNING OFF THE DESIGNATED AREA OR IF THE WATER IS NOT BEING CONTAINED WITHIN THE WASHOUT AREA.
4. DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE. IF AN EMERGENCY ARISES, BACK FLUSH SHALL ONLY BE PERFORMED WITH THE PERMISSION OF THE ENGINEER.
5. DO NOT USE ADDITIVES WITH WASH WATER.

MAINTENANCE:

1. FILTER FENCE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. INSPECT GRAVEL ACCESS DRIVE PERIODICALLY AND REPLACE DISPLACED STONE.

EROSION CONTROL NOTES:

1. INLET FILTERS SHALL BE INSTALLED IN ALL CATCH BASIN INLETS, SEE DETAIL SHEET 18.
2. SILT FENCE SHALL BE INSTALLED IN LOCATIONS SPECIFIED ON PLANS FOR SEDIMENT CONTROL.
3. WATER FROM TRENCH DEWATERING SHALL BE FILTERED OR DISCHARGED TO A FLAT GRASS COVERED AREA AND NOT DIRECTLY DISCHARGED TO ANY DITCH, STREAM, WETLAND, OR STORM WATER CONVEYANCE.
4. MATERIAL FROM TRENCH EXCAVATION SHALL BE PILED ALONG THE SIDE OF THE TRENCH AND SHALL BE PLACED AWAY FROM ANY STREAM, WATERWAY, DITCH, WETLAND, OR STORM WATER CONVEYANCE. MATERIAL NOT USED FOR BACKFILL SHALL BE DISPOSED OF PROPERLY.
5. TO MINIMIZE SEDIMENT TRACKING ONTO STREETS, THE CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCES, SHOWN ON SHEET 04 AND PER DETAIL ON SHEET NO. 17 AND 19. STREETS SHALL BE SWEPT AND CLEANED ON A DAILY BASIS AT A MINIMUM AND MORE FREQUENTLY AS SEDIMENT IS TRACKED ONTO ROADWAYS ACCORDING TO THE SEDIMENT TRACKING SPECIFICATION, PART 3.05 OF SPECIFICATION 02101.
6. DIRECTLY FOLLOWING INSTALLATION OF STORM SEWERS, DISTURBED SOILS MUST BE TEMPORARILY OR PERMANENTLY SEEDED.
7. IN NO INSTANCE SHALL CONSTRUCTION MATERIAL, FILL, OR DEBRIS BE PLACED IN A DITCH, STREAM, WETLAND, OR WATERWAY.
8. INSTALL AND UTILIZE CONCRETE WASHOUT AREA PER DETAIL ON SHEET 18 OR UTILIZE A PLASTIC LINED ROLL OFF CONTAINER FOR CONCRETE WASHOUT AT AREAS WHERE SIDEWALKS, AND CURB REPLACEMENT WILL BE INSTALLED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
9. IMMEDIATELY FOLLOWING RE-GRADING OF THE DITCH, EROSION CONTROL BLANKET (DETAIL ON SHEET 18) SHALL BE INSTALLED TO STABILIZE AND REESTABLISH THE DITCH. A SWALE SEED MIX SHOWN ON SHEET NO. 19 SHALL BE USED DOWNSTREAM OF STR. A01 AND ALONG LINE B IN AREAS TO REMAIN OPEN DITCH FROM TOP OF BANK TO BOTTOM OF DITCH. TURF GRASS IS TO BE INSTALLED IN SWALES ABOVE NEW STORM SEWER PIPE AND IN ALL OTHER LOCATIONS.



SILT

FILTER FENCE NOTES:

1. SYNTHETIC FILTER FABRIC SHALL BE A PER
   SHALL BE CERTIFIED BY THE MANUFACTURE
   FILTER EFFICIENCY: 85% (MIN.)
   TEXTILE STRENGTH AT 20% (MAX.) ELON
   EXTRA STRENGTH – 50 LBS./LIN. IN.
   STANDARD STRENGTH – 30 LBS./LIN.
   FLOW RATE: 15 GAL./MIN./SQUARE FEE
2. POSTS FOR FILTER FENCES SHOULD BE EIT
   MINIMUM LENGTH OF 5 FEET. METAL POSTS
3. STAKES FOR FILTER FENCES SHALL BE 1" x
   LENGTH OF 3 FEET.
4. WIRE FENCE REINFORCEMENT FOR SILT FENC
   MINIMUM OF 42 INCHES IN HEIGHT, A MINIM
   6 INCHES.
5. THE HEIGHT OF THE BARRIER SHOULD NOT
6. THE FABRIC SHOULD BE PURCHASED IN A
   THE USE OF JOINTS. WHEN JOINTS ARE NE
   SUPPORT POST, WITH A MINIMUM 6-INCH O
7. POSTS SHOULD BE SPACED A MAXIMUM OF
   INTO THE GROUND (MINIMUM OF 12 INCHES
   SUPPORT FENCE, POST SPACING SHALL NO
8. A TRENCH SHOULD BE EXCAVATED APPROX
   POSTS AND UPSLOPE FROM THE BARRIER.
9. WIRE MESH SUPPORT FENCE SHOULD BE FA
   HEAVY DUTY 1 INCH WIRE STAPLES, TIE WI
   MINIMUM OF 2 INCHES AND SHOULD NOT E
   SURFACE.
10. FILTER FABRIC SHALL BE STAPLED OR WIRE
    EXTENDED INTO THE TRENCH. THE FABRIC
    GROUND SURFACE.
11. THE TRENCH SHALL BE BACKFILLED AND TH
12. SILT FENCES SHALL BE REMOVED WHEN TH
    UPSLOPE AREA HAS BEEN PERMANENTLY S

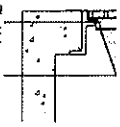
MAINTENANCE:

1. FILTER FENCE BARRIERS SHALL BE INSPECT
   PROLONGED RAINFALL. ANY REQUIRED REP
2. SHOULD THE FABRIC DECOMPOSE OR BECO
   AND THE BARRIER STILL BE NECESSARY, TH
3. SEDIMENT DEPOSITS SHOULD BE REMOVED
   DEPOSITS REACH APPROXIMATELY HALF THE
4. ANY SEDIMENT DEPOSITS REMAINING IN PLA
   REQUIRED SHALL BE DRESSED TO CONFORM

INLET GRATE (GRATE TYPES VARY)

INLET FILTER FRAME, SUSPENSION SYSTEM AND LIFT HANDLES INSTALL BETWEEN INLET CASTING AND GRATE

NONWOVEN POLYPROPYLENE GEOTEXTILE SEDIMENT FILTER BAG OVERFLOW OUTLET REQUIRED



INLET STRU (STRUCTUI

FLeXstorm INLET FILTER INSERT
LOCAL SUPPLIER: DRAINAGE SOLUTIONS
PHONE 317-885-9268

T

INLET PF

NO SCALE

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE: NONE (0, 15, 30, 60)

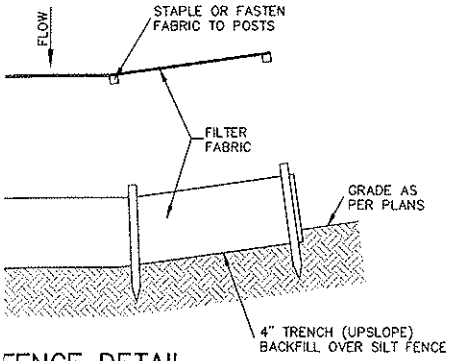
ISSUE DATE: MAY 2010

PROJECT NUMBER: 128609.04.02

NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

Sheet No. 18



FENCE DETAIL

NO SCALE

OUS SHEET OF WOVEN GEOTEXTILE FABRIC AND
OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

ATION:
MIN.)
N.
WOVEN); 220 GAL./MIN./SQUARE FEET (NON-WOVEN)
R 2-INCH DIAMETER WOOD OR EQUIVLAENT METAL POSTS WITH A
HOULD HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
2" WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM

S USING STANDARD STRENGTH FILTER CLOTH SHALL BE A
M OF 14 GUAGE AND SHALL HAVE A MAXIMUM MESH SPACING OF

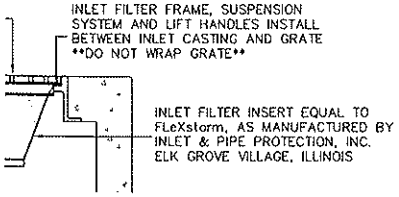
XCEED 36 INCHES.
ONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID
SSARY, FILTER FABRIC SHALL BE SPLICED TOGETHER ONLY AT A
ERLAP, AND SECURELY SEALED.
FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY
WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE
EXCEED 8 FEET.
ATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE LINE OF

TENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING
S OR HOG RINGS. THE WIRE SHOULD EXTEND INTO THE TRENCH A
END MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND

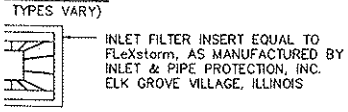
TO THE FENCE, AND 8 INCHES OF THE FABRIC SHOULD BE
OULD NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL

SOIL COMPACTED OVER THE FILTER FABRIC.
HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE
BILIZED.

D AFTER EACH RAINFALL AND AT LEAST DAILY DURING
IRS SHOULD BE MADE IMMEDIATELY.
INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE
FABRIC SHALL BE REPLACED PROMPTLY.
TER EACH STORM EVENT. THEY MUST BE REMOVED WHEN
HEIGHT OF THE BARRIER.
E AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER
WITH THE PROPOSED FINISHED GRADE.



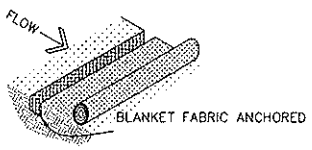
URE SIDE VIEW
TYPES VARY)



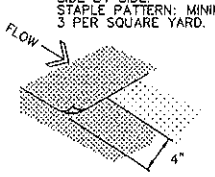
VIEW

OTECTION FILTER

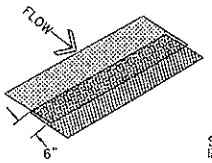
① BURY UPSLOPE END OF BLANKET IN A TRENCH 6" DEEP BY 6" WIDE.



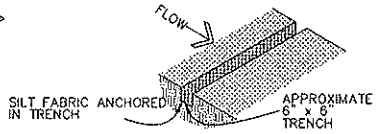
② USE A 4" OVERLAP WHEREVER TWO WIDTHS OF BLANKET ARE APPLIED SIDE BY SIDE. STAPLE PATTERN: MINIMUM 3 PER SQUARE YARD.

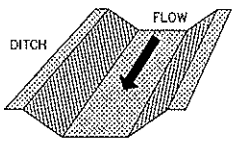


③ USE A 6" OVERLAP WHEREVER ONE ROLL OF BLANKET ENDS AND ANOTHER BEGINS.

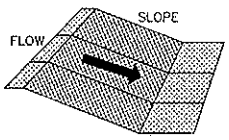


④ CHECK SLOTS SHOULD BE MADE EVERY 18'. INSERT A FOLD OF THE BLANKET INTO A TRENCH 6" WIDE BY 6" DEEP AND TAMP FIRMLY. LAY THE BLANKET SMOOTHLY ON THE SURFACE OF THE SOIL; DO NOT STRETCH THE BLANKET, AND DO NOT ALLOW WRINKLES. INSTALL STAPLE 20" ON CENTER IN TRENCH.





PLACE BLANKET PARALLEL TO THE DIRECTION OF FLOW. DO NOT JOIN STRIPS IN THE CENTER OF THE DITCH. USE CHECK SLOTS AS REQUIRED.



PLACE BLANKET PARALLEL TO THE DIRECTION OF FLOW AND ANCHOR SECURELY. BRING BLANKET TO A LEVEL AREA BEFORE TERMINATING THE INSTALLATION.

MAINTENANCE:

1. INSPECT FOR EROSION AFTER EACH STORM EVENT DURING VEGETATION ESTABLISHMENT.
2. IF ANY AREAS SHOW EROSION, PULL BACK THAT PORTION OF THE BLANKET, ADD SOIL, RESEED, RELAY AND STAPLE THE BLANKET.
3. CHECK AREAS PERIODICALLY AFTER VEGETATION ESTABLISHMENT.

EROSION CONTROL BLANKET DETAIL

NO SCALE

WESSLER ENGINEERING
More than a Project™

ROBINWOOD STORMWATER IMPROVEMENTS

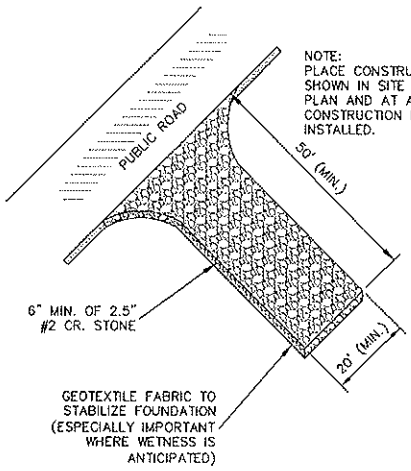
BROWNSBURG STREET DEPARTMENT
TOWN OF BROWNSBURG, INDIANA

EROSION CONTROL DETAILS

DETAILS

SHEET NO. **18**

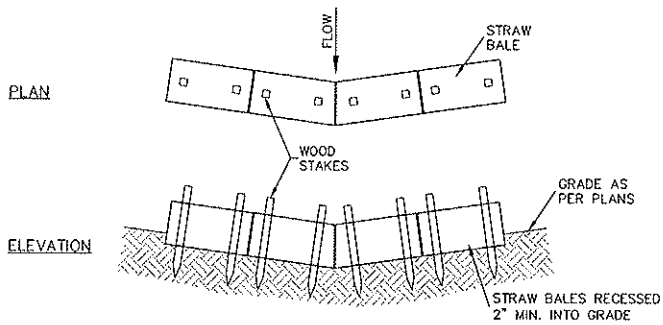
TOTAL SHEETS 26



CONSTRUCTION ENTRANCE DETAIL

NO SCALE

MAINTENANCE:
INSPECT PERIODICALLY AND REPLACE DISPLACED STONE.



STRAW BALE FILTER DETAIL

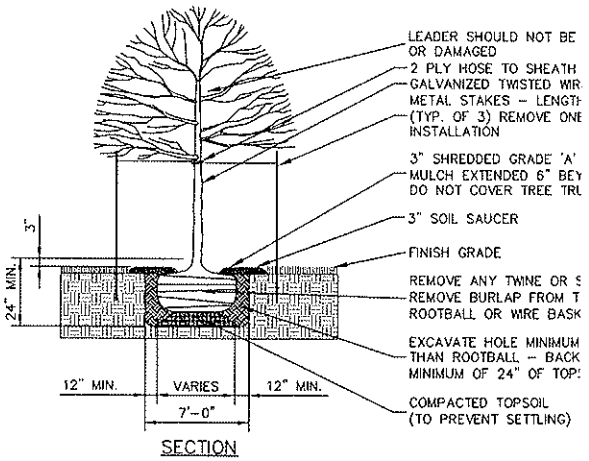
NO SCALE

STRAW BALE NOTES:
1. ALL BALES SHOULD ALL BE EITHER WIRE-BOUND OR STRING-TIED. STRAW BALES SHOULD BE INSTALLED SO THAT BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES (IN ORDER TO PREVENT DETERIORATION OF THE BINDINGS.)
2. THE BARRIER SHOULD BE ENTRENCHED AND BACKFILLED. A TRENCH SHOULD BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED AND CHINKED, THE EXCAVATED SOIL SHOULD BE BACKFILLED AGAINST THE BARRIER. BACKFILL SOIL SHOULD CONFORM TO THE GROUND LEVEL ON THE DOWNHILL SIDE AND SHOULD BE BUILT UP TO 4 INCHES AGAINST THE UPHILL SIDE OF THE BARRIER.
3. EACH BALE SHOULD BE SECURELY ANCHORED BY AT LEAST TWO STAKES OF WOOD OR STEEL DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHOULD BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES SHOULD BE DRIVEN DEEP ENOUGH INTO THE GROUND TO SECURELY ANCHOR THE BALES.
4. THE GAPS BETWEEN BALES SHOULD BE CHINKED (FILLED BY WEDGING) WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES.
5. IN SHEET FLOW APPLICATIONS, BALES SHOULD BE PLACED IN A SINGLE ROW, LENGTHWISE ON THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
6. IN CHANNEL FLOW APPLICATIONS, BALES SHOULD BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PERPENDICULAR TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. THE BARRIER SHOULD BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE TO ASSURE THAT SEDIMENT LADEN RUNOFF WILL BE TRAPPED.

MAINTENANCE:
1. REMOVE SEDIMENT DEPOSITS PROMPTLY (TO ENSURE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN), TAKING CARE NOT TO UNDERMINE THE ENTRENCHED BALES.
2. INSPECT FOR DETERIORATION OR DAMAGE FROM CONSTRUCTION ACTIVITIES; REPLACE DAMAGED BALES IMMEDIATELY
3. WHEN THE CONTRIBUTING DRAINAGE AREA HAD BEEN STABILIZED, REMOVE ALL STRAW BALES AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.

EROSION CONTROL SCHEDULE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDER
NOTIFY IDEM RULE 5 COORDINATION (317-233-1864) AND THE HENDRICKS COUNTY SWCD (317-745-2555 EXT. 3) WITHIN 48 HOURS PRIOR TO STARTING CONSTRUCTION. POST THE CONTACT INFORMATION AT THE CONSTRUCTION ENTRANCE. INCLUDE A COPY OF THE NOI AND THE ONSITE PERSON WHO IS RESPONSIBLE FOR IMPLEMENTING THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHOULD BE ONSITE AND WEEKLY SITE REPORTS MUST BE AVAILABLE WITHIN 48 HOURS OF REQUEST.	WITHIN 48 HOURS PRIOR TO S CONSTRUCTION.
INSTALL STRAW BALE CHECK DAMS, AND INLET PROTECTION.	PRIOR TO CONSTRUCTION ACTI
CONSTRUCTION ACCESS – ENTRANCE TO SITE, CONSTRUCTION ROUTES, AREAS DESIGNATED FOR EQUIPMENT PARKING.	THIS IS THE FIRST LAND-DIST AS SOON AS CONSTRUCTION STABILIZE ANY BARE AREAS W AND TEMPORARY VEGETATION.
PERIMETER PROTECTION – INSTALL SILT FENCING.	BEFORE LAND DISTURBING AC CONDUCTED, PERIMETER PROTI BE INSTALLED.
RUNOFF CONVEYANCE SYSTEM – STABILIZE STREAM BANKS, STORM DRAINS, CHANNELS, AND INLET AND OUTLET PROTECTION.	IF NECESSARY, STABILIZE STR SOON AS POSSIBLE, AND INST RUNOFF CONVEYANCE SYSTEM CONTROL MEASURES. THE RE THE SYSTEMS MAY BE INSTAL GRADING.
LAND CLEARING AND GRADING – SITE PREPARATION (CUTTING, FILLING, AND GRADING, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING).	IMPLEMENT MAJOR CLEARING AFTER INSTALLATION OF PRIN AND KEY RUN-OFF CONTROL INSTALL ADDITIONAL CONTROL GRADING CONTINUES. CLEAR DISPOSAL AREAS AS NEEDED. TREES AND BUFFER AREAS F PRESERVATION.
SURFACE STABILIZATION – TEMPORARY AND PERMANENT SEEDING, MULCHING, RIPRAP.	TEMPORARY OR PERMANENT MEASURES SHOULD BE APPLIE TO ANY DISTURBED AREAS W BEEN EITHER COMPLETED OR
CONSTRUCTION – UTILITIES, PAVING	DURING CONSTRUCTION, INSTA AND SEDIMENTATION CONTROL THAT ARE NEEDED.
LANDSCAPING AND FINAL STABILIZATION – TOPSOILING TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, RIPRAP.	THIS IS THE LAST CONSTRUCT STABILIZE ALL OPEN AREAS, BORROW AND SPOIL AREAS, STABILIZE ALL TEMPORARY C MEASURES. A UNIFORM COVE VEGETATION IS REQUIRED.



SECTION

NOTE:
ROOT FLARES TO BE PLANTED AT OR SLIGHTLY ABOVE GRADE.
GUY WIRES, HOSE & STAKES TO BE REMOVED ONE YEAR AFTER PLANTING.

DECIDUOUS TREE DETAIL

SCALE: NONE

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE
NONE
0 15 30 60
ISSUE DATE
APRIL 2010
PROJECT NUMBER
128609.04.02

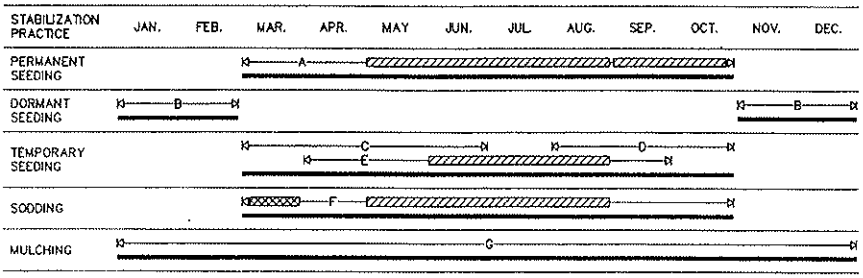
NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

CERTIFICATION

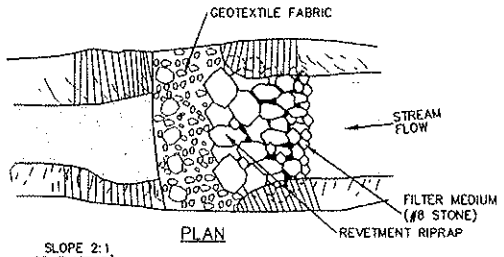
Sheet No. 19

SEASONAL SOIL PROTECTION CHART

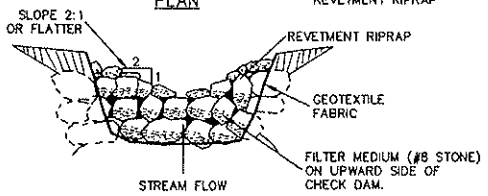


A = KENTUCKY BLUEGRASS 40 LBS/ACRE; CREEPING RED FESCUE 40 LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 20 LBS/ACRE.
B = KENTUCKY BLUEGRASS 60 LBS/ACRE; CREEPING RED FESCUE 60 LBS/ACRE; PLUS 2 TONS STRAW MULCH/ACRE, OR ADD ANNUAL RYEGRASS 30 LBS/ACRE.
C = SPRING OATS 3 BUSHEL/ACRE
D = WHEAT OR RYE 2 BUSHEL/ACRE
E = ANNUAL RYEGRASS 40 LBS/ACRE. (1 LB/1000 SQ. FT.)
F = SOD
G = STRAW MULCH 2 TONS/ACRE OR WOOD FIBER OR CELLULOSE 1 TON/ACRE OR WOOD CHIPS 5 TONS/ACRE

▨ IRRIGATION NEEDED DURING JUNE, JULY, AND/OR SEPTEMBER.
▩ IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.



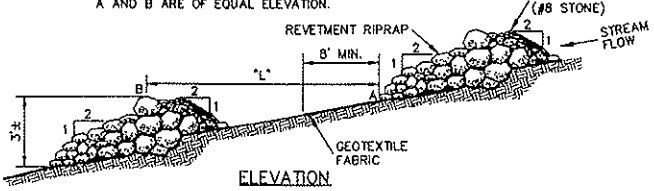
PLAN



CROSS SECTION

NOTE:
SPACE CHECK DAMS AS SHOWN IN SITE EROSION CONTROL PLAN.

"L" = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.



ELEVATION

RIPRAP CHECK DAM DETAIL

NO SCALE

Swale Seed Mix				
Botanical Name	Common Name	PLS Ounces/Acre	Seeds/Oz	Seeds/SQ FT.
Permanent Grasses/Sedges:				
Andropogon gerardi	Big Bluestem	12.00	8188	2.26
Carex comosa	Bristly Sedge	2.00	41183	1.89
Carex cristatella	Crested Oval Sedge	1.00	59000	1.35
Carex lurida	Bottlebrush Sedge	2.50	12000	0.69
Carex spp.	Prairie Sedge Mix	2.00	33422	1.53
Carex vulpinoidea	Brown Fox Sedge	4.00	125000	11.48
Elymus virginicus	Virginia Wild Rye	8.00	4375	0.80
Glyceria striata	Fowl Manna Grass	1.00	125000	2.87
Panicum virgatum	Switch Grass	2.00	28356	1.30
Scirpus atrovirens	Dark Green Rush	2.00	187500	8.61
Scirpus cyperinus	Wool Grass	0.50	562500	6.46
Spartina pectinata	Prairie Cord Grass	3.00	15750	1.08
	Total:	40.00		40.33
Temporary Cover:				
Avena sativa	Common Oat	360.00	8125	67.15
Lolium multiflorum	Annual Rye	100.00	14188	32.57
	Total:	460.00		99.72
Forbs:				
Alisma spp.	Water Plantain (Various	1.00	70175	1.61
Asclepias incarnata	Swamp Milkweed	2.00	4540	0.21
Aster novae-angliae	New England Aster	0.50	76000	0.87
Coreopsis tripteris	Tall Coreopsis	1.00	11500	0.26
Eupatorium maculatum	Spotted Joe-Pye Weed	0.25	78125	0.45
Iris virginica	Blue Flag	4.00	1400	0.13
Liatris spicata	Marsh Blazing Star	1.00	12000	0.28
Lobelia cardinalis	Cardinal Flower	0.25	437000	2.51
Lobelia siphilitica	Great Blue Lobelia	0.50	520000	5.97
Lycopus americanus	Common Water Horehox	0.25	235000	1.35
Sagittaria latifolia	Common Arrowhead	0.75	56700	0.98
Silphium terebinthinaceu	Prairie Dock	1.00	1100	0.03
Verbena hastata	Blue Vervain	1.50	125000	4.30
Zizia aurea	Golden Alexanders	0.75	12000	0.21
	Total:	14.75		18.94

Mix Statistics				
Native Component	PLS lbs./Acre	PLS Seeds/Acre	PLS Seeds/Sq. Ft.	% of Native Mix
Forbs	0.92	625,011	18.94	31.96%
Grasses	2.50	1,756,678	40.33	68.04%
Total Natives	3.42	2,581,689	59.27	100.00%
Cover	28.75	4,343,800	99.72	
Totals	32.17	6,925,489	158.99	

NOTE:
1. USE SWALE SEED MIX DOWNSTREAM OF STR. A01 AND ALONG LINE B IN AREAS TO REMAIN OPEN DITCH FROM BOTTOM OF DITCH TO TOP OF BANK.
2. USE TURF GRASS SEED MIX ELSEWHERE.

WESSLER ENGINEERING
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ROBINWOOD STORMWATER IMPROVEMENTS

BROWNSBURG STREET DEPARTMENT
TOWN OF BROWNSBURG, INDIANA

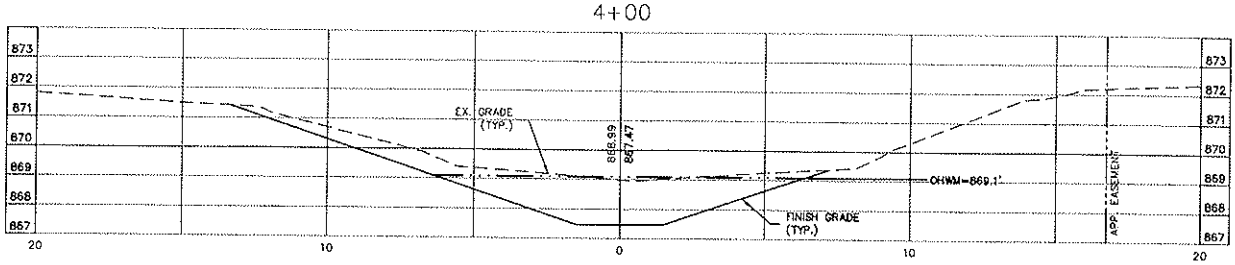
EROSION CONTROL DETAILS

DETAILS

SHEET NO. **19**

TOTAL SHEETS 27

4+00



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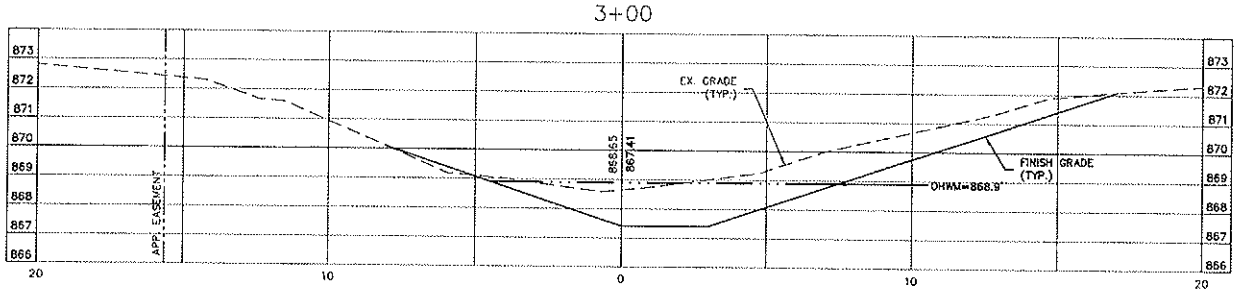

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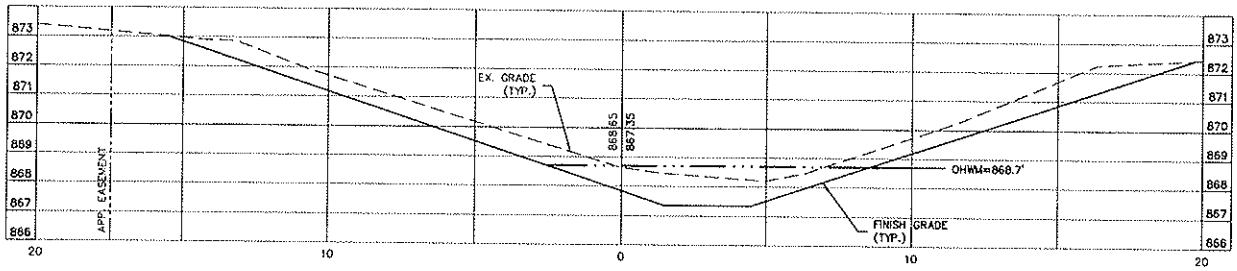

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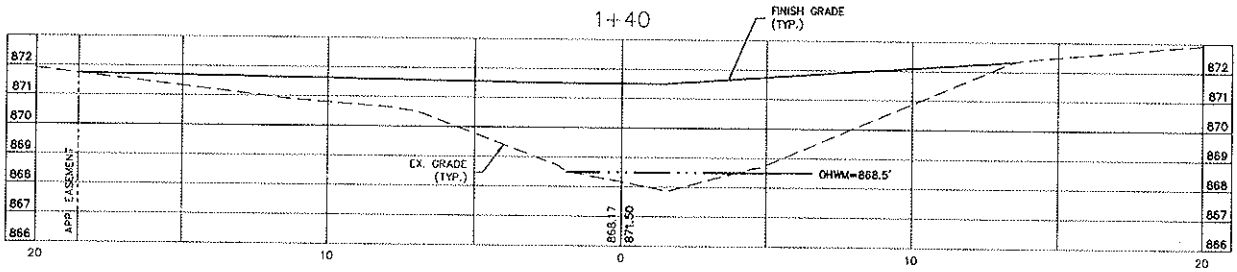

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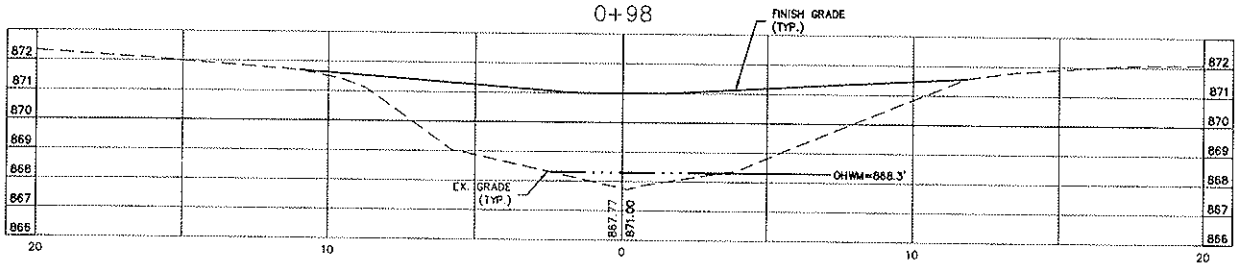

Approximate half size

HORIZONTAL SCALE 1"=3'

VERTICAL SCALE 1"=3'

Sheet No. 23

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE

0 1.5 3 5

ISSUE DATE
APRIL 2010

PROJECT NUMBER
128609.04.02

NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

Machine

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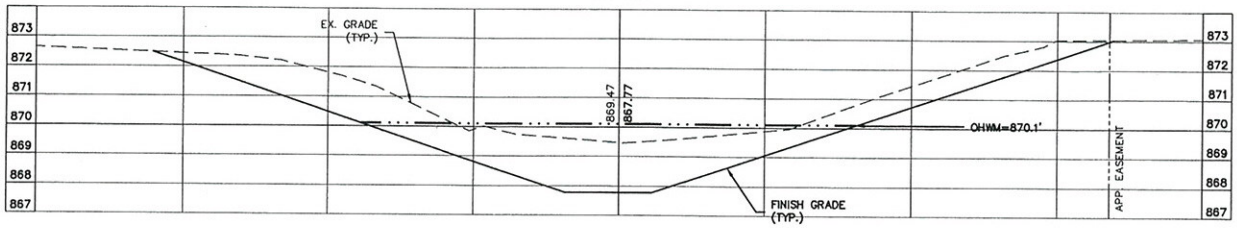
9+00



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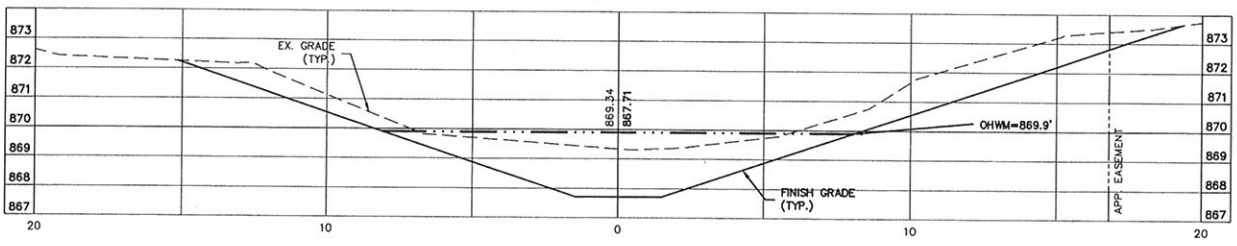

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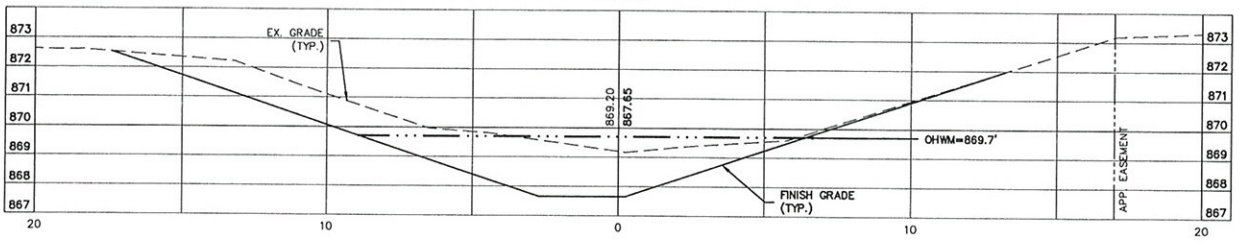

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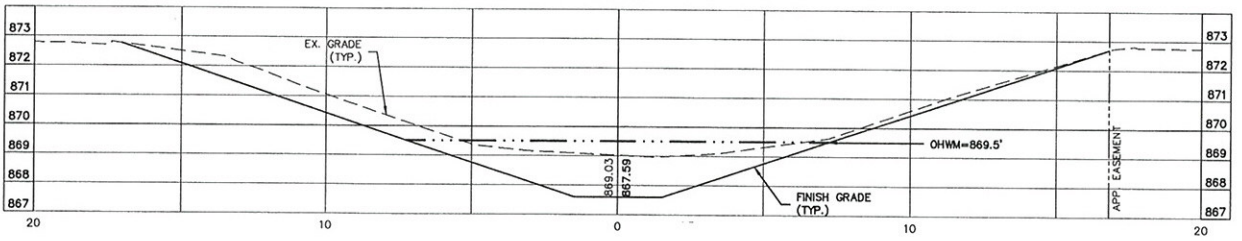

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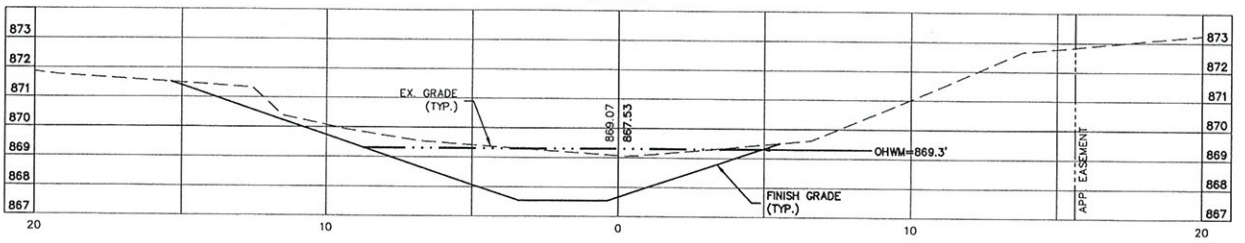

Matchline G

NOTE:
DITCH TO RECEIVE SWALE SEED MIN. BELOW ORDINARY HIGH WATER MARK (OHWM) ELEVATION SHOWN AND TURF GRASS SEED MIX ELSEWHERE.

CERTIFICATION

WESSLER ENGINEERING
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ROBINWOOD STORMWATER IMPROVEMENTS

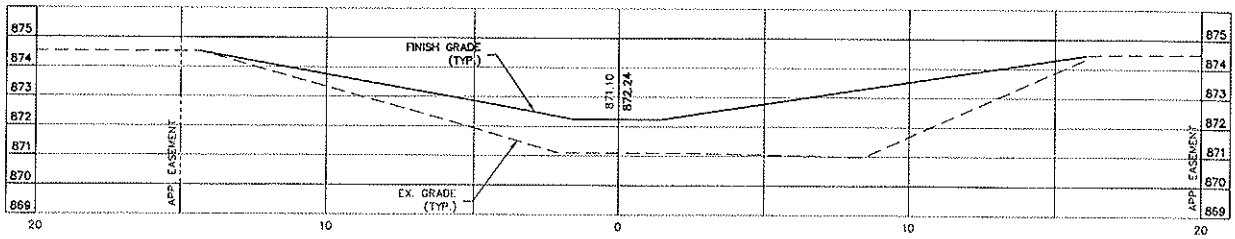
BROWNSBURG STREET DEPARTMENT
TOWN OF BROWNSBURG, INDIANA

DRAINAGE LINE "B"
STA. 0+98 THROUGH 9+00
CROSS SECTIONS

SHEET NO.
23

TOTAL SHEETS
26

14+59



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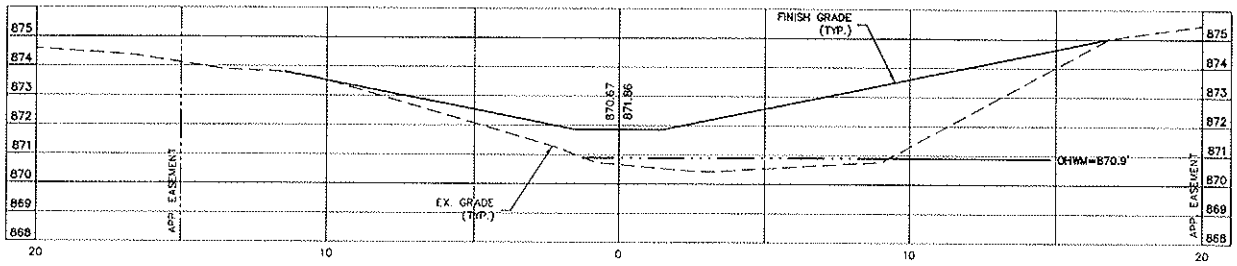

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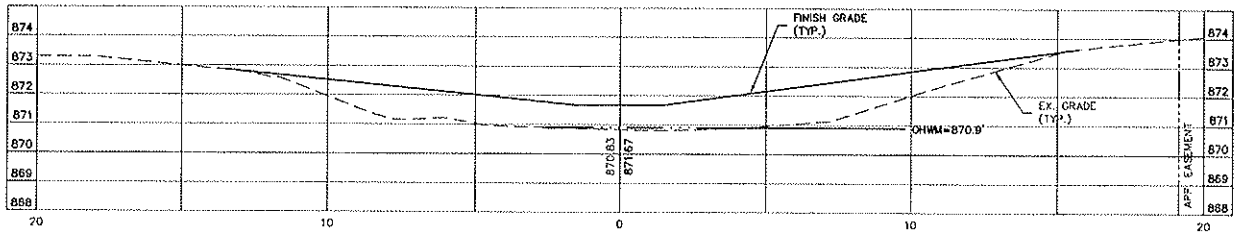

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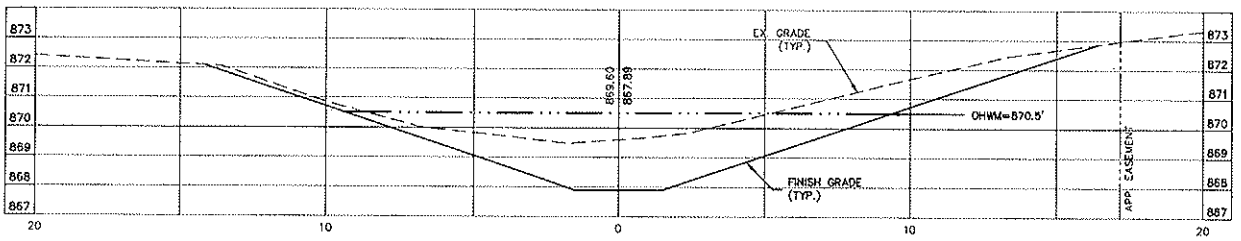

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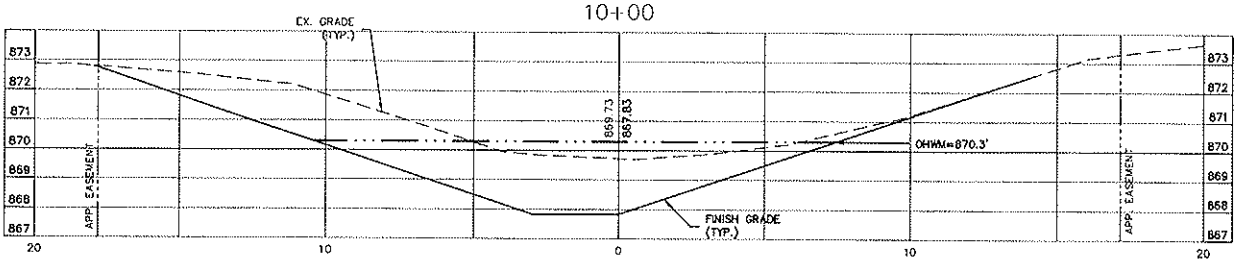


Approximate half size

HORIZONTAL SCALE 1"=3'

VERTICAL SCALE 1"=3'

Sheet No. 24

DRAWN BY	CHECKED BY	APPROVED BY
P.D.R.	D.L.L.	D.E.D.

DRAWING SCALE

0 1.5 3 6

ISSUE DATE
APRIL 2010

PROJECT NUMBER
128609.04.02

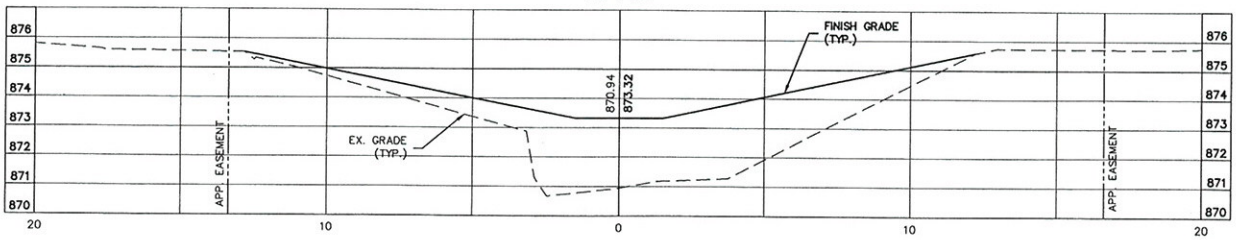
NO.	DATE	INITIALS	DESCRIPTION

REVISIONS

Matching

Match line H

19+82



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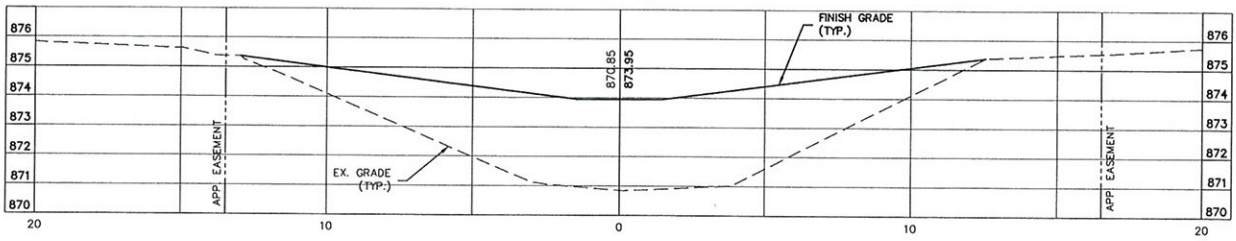

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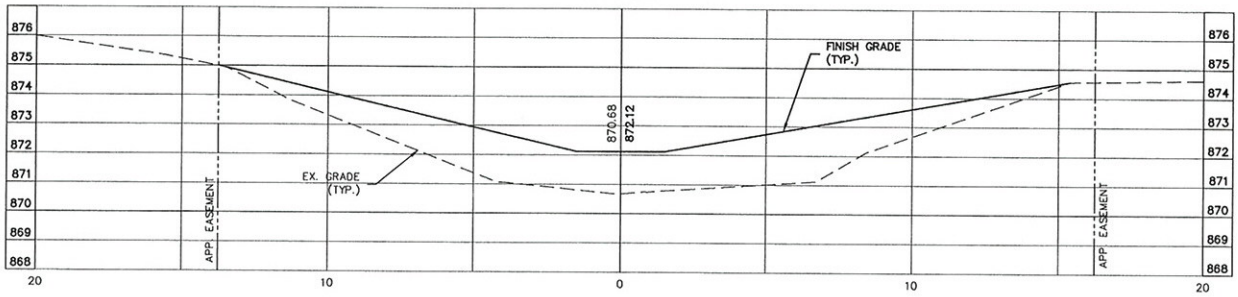

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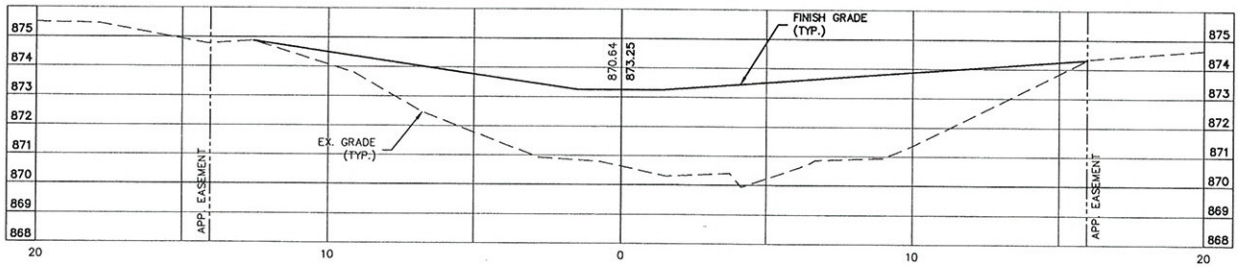

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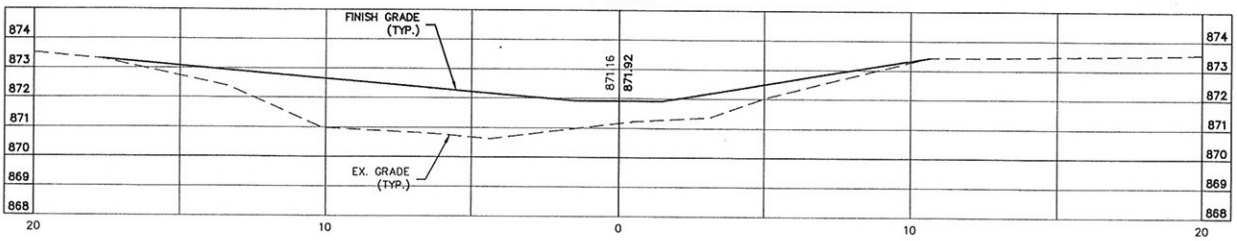

CERTIFICATION

WESSLER ENGINEERING
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ROBINWOOD STORMWATER IMPROVEMENTS

BROWNSBURG STREET DEPARTMENT
TOWN OF BROWNSBURG, INDIANA

DRAINAGE LINE "B"
STA. 10+00 THROUGH 19+82
CROSS SECTIONS

SHEET NO. **24**

TOTAL SHEETS 26

Picture 1 – Looking west (John Garvey and Neal Legal Drain)

Picture 2 – Looking southeast (John Garvey and Neal Legal Drain)

Picture 3 – Looking east (John Garvey and Neal Legal Drain)

Picture 4 - Standing on Hornaday Road looking east (John Garvey Ditch)

Picture 5 – Looking northwest (John Garvey Ditch)

Picture 6 – Looking west (John Garvey Ditch)

Picture 7 – Looking east (John Garvey Ditch)

Picture 8 – Looking east at the ditch (John Garvey Ditch)

Picture 9 – Looking east at the ditch (John Garvey Ditch)

Picture 10 – Looking east at the ditch (John Garvey Ditch)

Picture 11 - Looking southeast (John Garvey Ditch)

Picture 12 - Looking northeast (John Garvey Ditch)

Picture 13 - Looking northwest (John Garvey Ditch)